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THE
DICTIONARY
OR
DAILY WANTS

IN THREE VOLUMES.

IT IS ONE THING TO *POSSESS* A BOOK—ANOTHER THING TO *USE* IT. THE DICTIONARY OF DAILY WANTS IS EMINENTLY A BOOK FOR USEFUL PURPOSES. THERE CAN SCARCELY ARISE A DOMESTIC WANT UPON WHICH IT WILL NOT BE FOUND TO AFFORD GOOD ADVICE, AND SOUND PRACTICAL INFORMATION. ITS SPECIALITIES ARE THREEFOLD:—1. COMPREHENSIVENESS OF SUBJECTS. 2. ACCURACY OF INFORMATION. 3. EASE OF REFERENCE.

VOL. II.

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P R E F A C E.

WE present the Second Volume of the DICTIONARY OF DAILY WANTS to its Patrons, with feelings of great satisfaction. That which we said in the Preface to the First Volume respecting the plan of the work, applies, of course, equally to the Second Volume; and, indeed, to the complete DICTIONARY.

In pursuing the Alphabetical arrangement, the Compilers and Writers of the DICTIONARY OF DAILY WANTS, are naturally brought to the treatment of new subjects. It is scarcely necessary to state that the same care which marked the production of the earlier articles, continues still to be observed; and that, upon subjects of special prominence and importance, additional aid is frequently called in, by the employment of persons competent in matters which have been their peculiar or exclusive study.

The DISTRIBUTION OF PRIZES announced in connection with our First Volume, took place accordingly, and one hundred successful Numbers were announced upon the cover of our thirteenth Monthly Part, out of which more than ninety were sent in, and received Plates and Art Union Tickets, giving them a share in the Art Union Distribution of Prizes for the year 1859. One Hundred Shares in the Art Union were taken, as guaranteed, and a few Plates remain on hand to be given to those who hold Prize Numbers, yet unclaimed.

In the Art Union Distribution, the One Hundred Shares subscribed by us, failed to obtain either of the Larger Prizes. Among those who had received their Tickets from us, Mrs. E. LEGGERY, of Plumstead, gained a beautiful Statuette of *The Dancing Girl Reposing*; Mr. THOMAS JONES, Greet's House, near York, gained an elegant *Volume*

of *Choice Photographs*; and Mr. G. WOOLSTONE, Great Yarmouth, obtained a similar *Volume of Photographs*.

The larger Prizes in the Distribution were gained by Members of the Art Union, who had purchased their guinea Tickets in the ordinary manner:—

Mr. WM. DIXON, Grantham	..	..	£200
Mr. G. TUNNICLIFFE, Market Drayton	..	..	150
Mr. J. DOMONE, Christchurch	..	..	100
Mr. J. LAVAN, Oxford Road	..	..	75
Mr. G. RINGDEN, Canterbury	..	..	75

There were the usual number of smaller Prizes, from £5 up to £60.

The fact that none of our Subscribers gained a large Prize last year, according to the *theory of probabilities*, improves their chances next: because, the proportion of Prizes to every Hundred Subscribers, *assumes an average over a number of years*. We have much hope, therefore, that one of our Subscribers will this year take—we may as well say it plainly—the £200 Prize.

As we are now about to give TWO HUNDRED SHARES—one hundred to the Subscribers to this Dictionary, and one hundred to the Subscribers to its valuable Companion, the DICTIONARY OF USEFUL KNOWLEDGE, we have a still greater probability of carrying off one or more of the material Prizes.

Those of our Subscribers who take the DICTIONARY OF USEFUL KNOWLEDGE, *also*, will have a share in the Distribution of TWO HUNDRED ART UNION TICKETS. We trust that those who wish to avail themselves of this *double chance* will be in time, and order the twelve Parts of the DICTIONARY OF USEFUL KNOWLEDGE, before the Prize Numbers are announced.

We are happy to state that the DICTIONARY OF DAILY WANTS will be completed in Three Volumes, as already estimated, and it will doubtless be found a most valuable domestic work; one, indeed, of which the worth *cannot be fully ascertained until, after the lapse of many years, a thousand references to it have proved necessary, and as many benefits been received*.

London, November, 1859.

DISTEMPER.—The general term for a disease that affects animals under different forms, and is attended by a variety of symptoms. To ward off this disease as much as possible, animals should be liberally and nutritiously fed, and allowed a proper amount of air and exercise. The treatment of this complaint is regulated by the actual state of the disease; but the general principles are based upon blood-letting, and the administering of mild purgatives.—See DOGS, HORSE, &c.

DISTEMPER COLOURING.—An inferior kind of colouring used for both internal and external walls, but principally for the former, instead of oil colour, being a cheap substitute. It is composed of whiting mixed with size of a coarse quality, in the proportion of twelve pounds of whiting to one pound of size. The size is hoiled and reduced to a proper working consistence by the addition of water, after which the colour is added, to form the necessary tint.

DISTILLATION.—The art of drawing spirituous and other fluids of a mixed body, and collecting and condensing them by cold. The process of distillation, as carried on at distilleries, is divided into four general operations, viz., the *mashing* or formation of a saccharine infusion from certain vegetable matters, as malt, barley, oats, rye, &c.; the *cooling* of this wort or liquor; the *fermentation*, or process by which the sugar of the cooled wort is converted into alcohol; and the *separation* of the spirit so formed by means of a still and refrigerator. The process of distillation for domestic purposes is very simple; it consists of a vessel placed over a fire, with a round or spherical top to collect the vapour in a larger body, a free opening for the vapour to escape, and a connecting pipe which runs into a vessel containing cold water, and there being formed into what is called a coil or worm, the vapour as it flows through this worm is condensed by the cold water, and passes into a receiver in a liquid state. Where the article to be distilled requires delicacy of process, the fire should never strike immediately upon the still, but there should be two vessels; that in which the liquid to be distilled is put must fit into a boiler containing water, and the heat which drives off the vapour is received from the water in a high state of ebullition, and not from the direct action of the fire. Another mode is to place the still or boiler in a bath of sand, which receives its heat from a fire, and acts upon the contents of the still.

DISTRINGAS is a writ issuing out of the Court of Chancery at the instance of persons claiming to be interested in stock transferable at the Bank of England, standing in the name or names of any other person or persons. The party applying for this writ makes an affidavit that he believes himself to be beneficially interested in certain stock, stating the description of stock, the amount, the names of the persons in whom the same is standing, and that he believes there is danger of such stock being dealt with contrary to his interest. The Bank of England, upon being served with

such writ of distringas, will refuse to permit the transfer or withhold payment of the dividends, as the case may be, for eight days after an application by any other person to deal with them, during which time the party issuing the writ may obtain an order from the Court of Chancery declaring his rights in respect thereof. This is a very inexpensive proceeding, and a great protection to all persons interested in the principal of bank funds, where the dividends are payable to some other person. It should never be omitted to be obtained under such circumstances, inasmuch as it prevents the trustees selling out of the funds without notice to him.

DITCHING.—Ditch fences, in their simple and original state, were considered rather in the light of open drains than as fences. In a variety of instances ditches are made for this purpose only, where there is no intention to enclose the field. They are, however, sometimes meant as a fence, but in such cases they are made very deep and wide, and the earth taken out of them is sometimes formed into a bank, the height of which, when added to the depth of the ditch, forms a tolerable barrier. The form of ditches is various, some of them being of a uniform width at top and bottom; others are wide above, and have a gradual slope downwards; a third kind have one side sloping and the other perpendicular. For whatever purpose the ditch is meant, the sloping form is by far the best, as it not only costs less money in the digging, but is at the same time much more durable, and has a neater appearance. When open ditches are indispensably necessary for the drainage of the field, the sloping ditch is preferable to every other, as the sides are not liable to tumble in, or be undermined or excavated by the current of the water, when properly executed. The slope should be considerable, perhaps seldom less than three nor more than six times the width at top that it is at bottom.

DIURETICS are evacuates that act on the blood through the instrumentality of the kidneys. The medicines of this class are of two kinds, the saline and the vegetable. Of the former, the chief are the acetates, nitrates, and tartrates of potass, and the sweet spirits of nitre; and of the vegetable, squills, digitalis, tobacco, deadly nightshade, lettuce, meadow saffron, pomegranate, juniper, and cantharides.

DOGS, MANAGEMENT OF.—The best way to keep a dog healthy is to let him have plenty of exercise, and not to overfeed him. Let them have at all times a plentiful supply of clean water, and encourage them to take to swimming, as it assists their cleanliness. When they are washed no soap should be used, as it prevents their licking themselves, and they may thus become habitually dirty. Properly treated, dogs should only be fed once a day. Meat boiled for dogs, and the liquor in which it is hoiled, thickened with barleymeal or oatmeal, forms capital food. The distemper is liable to attack dogs from four months to four years old. It prevails most in spring and

autumn. The disease generally manifests itself by a dullness of the eye, husky cough, shivering, loss of appetite and energy, and occasional fits. During the prevalence of this complaint dogs should be allowed to run on the grass, their diet should be spare, and a little sulphur added in their water. To administer medicine to a dog, place him, if of moderate size only, upright on his hind legs, between the knees of a seated person. Apply a napkin round his shoulders, bringing it forward over the four legs, by which he is secured from resisting. The mouth being now forced open by the pressure of the forefinger and thumb upon the lip of the upper



jaw, the medicine can be conveniently introduced with the other hand, and passed sufficiently far into the throat to ensure its not being returned. The mouth should now be closed, and kept so until the matter given is seen to pass down. Chemists who dispense cattle medicines can generally advise with sufficient safety on the diseases of dogs, and it is best for unskilful persons to abstain from prescribing for them. With proper management, and firm yet humane treatment, a dog may be educated to a surprising degree of intelligence, and become at once a companion and a protector.—See BLOODHOUND, MASTIFF, NEWFOUNDLAND, SPANIEL, TERRIER; also HYDROPHOBIA, MANGE, &c. Books: *Blaine's Encyclopædia of Rural Sports*, 50s.; *Youatt on the Dog*, 6s.; *Johnson's The Dog, and how to Break him*, 3s.; *Hutchinson's Treatise*, 7s.; *Mayhew on Dogs*, 5s.

DOMESTIC ECONOMY.—For the various items connected with this subject, see BREAD, BREWING, BUTTER, CHEESE, CLEANING, COAL, LAUNDRY, MARKETING, MILK, SERVANTS, &c. Books: *Webster & Parke's Encyclopædia*, 50s.; *Donovan's Treatise*, 7s.; *Tegetmeyer's*, 1s. 6d.; *Merle's Dictionary*, 5s. 6d.; *Walsk's*, 10s. 6d.; *Eaton's Cook and Housekeeper's Guide*, 5s.; *Kitchener's Housekeeper's Oracle*, 7s.; *Enquire Within*, 2s. 6d.; *Corner Cupboard*, 2s. 6d.; *Housewife's Reason Why*, 2s. 6d.

DOMINOES.—This game is played by two or four persons, with twenty-eight pieces of oblong ivory, plain at the back, but on the face divided by a black line in the middle, and indented with spots, from one to a double six, which pieces are a double-blank, ace-blank, double-ace, deuce-blank,

deuce-ace, double-deuce, trois-blank, trois-ace, trois-deuce, double-trois, four-blank, four-ace, four-deuce, four-trois, double-four, five-blank, five-ace, five-deuce, five-trois, five-four, double-five, six-blank, six-ace, six-deuce, six-trois, six-four, six-five, and double-six. Sometimes a double set is played with, of which double twelve is the highest. At the commencement of the game, the dominoes are well mixed, with their faces downwards. Each person draws one, and if four play, those who choose the two highest are partners, against those who draw the two lowest; drawing the latter also serves to determine who is to lay down the first piece, which is reckoned a great advantage. Afterwards each player takes seven pieces at random. The eldest hand having laid down one, the next must pair him at either end of the piece he may choose, according to the number of pips or the blank in the compartment of the piece; but whenever any party cannot match the part, either of the domino last put down, or of that unpaired at the other end of the row, then he says "go," and the next is at liberty to play. Thus they play alternately, either until one party has played all his pieces, and thereby won the game, or till the game be blocked; that is, when neither party can play by matching the pieces when unpaired. After either end, then that party wins who possesses the smallest number of pips on the pieces remaining. In playing this game it is to the advantage of the player to dispossess himself as early as possible of the heavy pieces, such as a double-six, five, four, &c. Sometimes when two persons play, they take each only seven pieces, and agree to play or draw, that is when one cannot come in or pair the pieces on the board at the end unmatched, he then is to draw from the fourteen pieces in stock till he find one to suit.

DOORS, DEFECTIVE.—Much annoyance is sometimes experienced by the creaking of doors. This may be prevented by rubbing a little soap, or a mixture of tallow and blacklead on the hinges, or by applying to them with a feather a little sweet oil, once or twice a year. The trifling trouble and expense will be amply repaid by the noiselessness of the doors, and their greater durability. To prevent the noise of doors slamming, a piece of vulcanized India rubber, cork, or leather may be placed so as to receive the shock. Patent noiseless box staples and striking plates are ingenious.

DORY, JOHN.—A fish that affords very delicate eating; choose them from four to six pounds in weight, the thicker the better, and dress them as directed for BRILL.

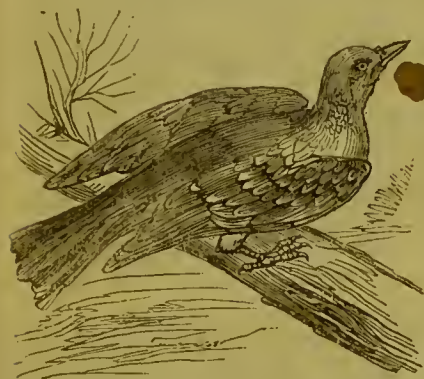
DOUGH.—See BREAD, CAKE, &c.

DOUGHNUTS.—Work smoothly with the finger four ounces of lard and four pounds of flour; add half a pound of fine brown sugar, two tablespoonfuls of allspice, one drachm of pounded cinnamon, half a drachm of cloves, two blades of mace powdered, two tablespoonfuls of fresh yeast which has been watered for one night, and which should be solid, add as much new milk as will convert the whole into a rather firm dough; let

this staud from an hour to an hour and a half near the fire, then knead it well and make it into balls about the size of a small apple; hollow them with the thumb, and enclose a few currants in the middle; gather the paste well over them, and throw them into a saucepan half filled with boiling lard; when they are equally coloured to a fine brown, lift them out and dry them before the fire on the back of a sieve. The lard should boil only just before the doughnuts are dropped into it, or the outsides will be scorched before the insides are sufficiently done.

Flour, 4lbs.; **lard**, 4ozs.; **sugar**, $\frac{1}{2}$ lb.; **allspice**, 2 tablespoonfuls; **pounded cinnamon**, 1 drachm; **cloves and mace**, each $\frac{1}{2}$ drachm; **yeast**, 2 tablespoonfuls; **currants**, at choice.

DOVE.—The smallest of the pigeon tribe. The male is about twelve inches long; the female smaller. The male bird is generally known by a white patch on the forehead, redness of the naked skin round the eye, bluish bill, and red feet. Doves are

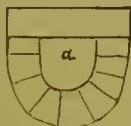


mild and gentle creatures, and although they are too shy to become domesticated, they very soon become tame in confinement. They should be kept in a warm and comfortable cage, with little rooms for them to retire to at night, and they may be fed with any kind of grain or pulse, as peas, beans, &c. They are also fond of bread, which should not be given them too new. Altogether they require to be treated with the greatest delicacy and attention, for, independently of their individual ailments, they become so attached to each other that if one dies, the other rarely survives.

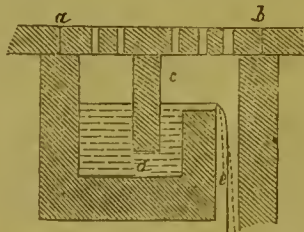
DOVER'S POWDER.—This is perhaps as useful a preparation as any to be found in the pharmacopœia, and though its most important action is that of a diaphoretic, it may be made to act in various ways, according to the dose prescribed. The proper name of this preparation is that of the compound opium and ipecacuanha powder, and only acquired the name of Dover's powder from an eminent physician who very frequently used it. It is made by mixing one part of opium and one of ipecacuanha with

eight parts of the sulphate of potass. Ten grains is a full adult dose, which contains one grain of opium.

DRAINAGE.—The drain of a building demand great attention from the architect who plans them in the first instance, and they also require to be kept in the most perfect order, to ensure the safety of the building, and the comfort and health of the inhabitants. It would be a wise provision if in every house, an accurate plan of all the drains were kept, with all the cesspools, traps, and sinks accurately marked, together with the cesspool, so that when repairs are needed, they may be made with considerably less expense and trouble than they ordinarily are. Small drains that require to be opened and cleaned out occasionally should



be in the form of the engraving, with concave or arched bottoms and flat tops, covered with flag-stones or paving tiles set in cement. The concave bottom enables the water to collect better together and move more freely than when the bottom is flat. It is of great importance that drains should be executed in a workmanlike manner, and a proper current given to carry off the water. If they are built in a careless and insufficient manner, the house is very likely to prove permanently damp and unhealthy. They should be constructed of sound bricks with Roman cement, and every precaution should be taken to make them perform their office with as little repairing as possible. When nothing prevents the foul air from coming out through the apertures by which the water goes down, the consequence is extremely disagreeable and even injurious to health, and to obviate this, bell traps should be fitted to every sink. This apparatus, however, is sometimes liable to be deranged by neglect or rough usage; and it is proper to construct another kind of brickwork. Somewhere in the course of the drain let there be sunk a small square well built round with bricks laid in cement, and be plastered on the inside with the same, so as to be completely watertight, and remain always filled with water. Across this well let there be



a piece of paving-stone so fixed that the top may touch the cover of the drain, and its lower edge dip below the surface of the water, in this trap or well. On the same principle as the bell trap, no air can pass along the drain, it being stopped by the

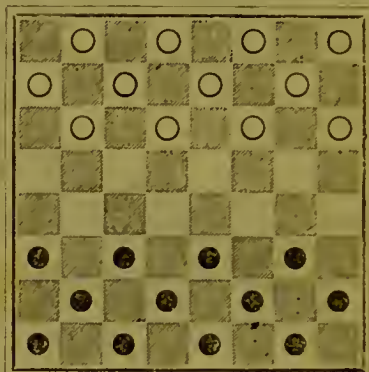
water below the stone. A cheap trap may be constructed of common red earthenware, to be used in places where any waste water goes down the drain. In the accompanying engraving, *a b c* represent a piece of coarse pottery, of which the horizontal part *a b* is about nine inches square, perforated with holes; from the under side of this piece *c* projects, and dips into the water that will always remain in the square receptacle *d*, and which will fall down and overflow by *e*, into the drain.

DRAINING LAND.—The necessity for draining land, in order to promote vegetation, is obvious. In undrained land, all the vacancies between the particles of earth being filled with water, air is necessarily absent, except that small quantity which is dissolved in the water. Under these circumstances, plants are deprived of the most essential part of their food. But when the water is removed, air takes its place and holds in suspension as much water as roots can thrive upon. The successful practice of draining, depends in a great measure on a proper knowledge of the structure of the various strata of which the earth is composed, of their relative degrees of capability of admitting and rejecting the passage of water, and of the modes in which water is formed and conducted from elevated situations to low or level ground. Where lands have a sufficient degree of elevation to admit of any over-proportion of moisture readily passing away, and where the soils of them are of such a uniform, sandy, or gravelly and uninterrupted texture as to allow water to percolate and pass through them with facility, they can be little inconvenienced by water coming upon or into them, as it must of necessity be quickly conveyed away into the adjacent rivers or streams in the vicinity. But where grounds are in a great measure flat, and without such degrees of elevation as may be sufficient to permit those over-proportions of moisture that may have come upon them from the higher and more elevated grounds, to pass rapidly away and be carried off, and when the soils of the land are composed of such materials as are liable to collect and retain moisture, they require artificial drainage. The drains should be cut about two feet wide, with the sides perfectly perpendicular, provided that, from the tenacity or hardness of the substances dug through, the sides will stand till the stones are put in. It is usual, however, to tread the ground somewhat wider at the top, and so to give it a slight slope to the bottom. In building the drain, it is usual to begin with small flat stones to construct the wall on each side of the bottom of the drain, nine inches broad and six inches high, so as to leave six inches for the conduit in the middle. When the bottom is wet, spongy clay, it is often necessary to pave the bottom of the conduit with very thin stones or slates.

DRAUGHTS FROM DOORS, WINDOWS, &c.—When from some defects in construction, or from long use, doors and windows will not close properly, the unpleasant current of air which they admit may be stopped by simple means. For doors, strips of list

or ornamented leather, which may be obtained at leathersellers' shops, should be tacked on the extreme edge of the door all round, so that when it shuts, the vacuum is completely covered, and the apartment thus kept warm. Windows that admit the air through crevices in the sash may be rectified by sand bags made of cloth or moreen being laid over the opening. Sitting in draughts is at all times a hazardous proceeding, and especially when the face and body are in a state of intense heat; under such conditions diseases are sometimes contracted which take months to eradicate. However heated a person may be, therefore, it is better to bear that, than to secure a few minutes' coolness at the expense of serious after consequences.

DRAUGHTS.—A game somewhat similar to chess, to which it is a good preliminary.



The draughtboard consists of sixty-four squares, black and white, and there are twelve men, or pieces, of a white colour, and twelve of a black colour to be used. The board should be placed with an upper white corner towards the right hand. The players select each twelve men of the colour they prefer. The pieces, or men, are to be thus placed on the board: the black pieces on the first twelve white squares, and the white on the last twelve white squares. When they are thus placed the game begins. The pieces are moved diagonally; and it is the object of the players to take the whole of each other's men; the player who has the black pieces taking the white, and the player who has the white men taking the black. The first player, say black, moves his piece diagonally to the first white square, and then, if nothing intervenes between his piece and that of his opponent, and there is a vacant square in his line left behind him, the white can pass his piece over him to the space so unoccupied and take his man, which is then withdrawn from the board. The same may be repeated by the adversary; and thus the players go on taking each other's pieces till one or the other cannot move, or all the pieces are taken. When a piece, however, arrives at the last row of the enemy's ground, it becomes a king, and is crowned by moving

piece being placed on it. It may then be moved backwards and forwards at pleasure, and can take both ways. When a player neglects to take a piece, he is what is called *huffed*, that is, he loses the piece that ought to have been moved. The *laws of the game* are—1. The moves are alternate, the first move being determined by lot. 2. The choice of men to be also decided by lot, but they should be changed every three games. 3. Whenever a piece is touched, it must be played. 4. No player can remain more than five minutes without playing; he may be warned at the end of five minutes. 5. Neither player must leave the room without permission of his adversary. 6. In case of *huff*, the opponent, in lieu of taking a piece for the omission, can insist on his being taken. 7. Each party must sit free, so as not to obstruct a view of the board, and no pointing at pieces is allowed. 8. When a false move is made, the piece must be moved to whatever square the opponent dictates. 9. All disputes between players to be referred to a third party. 10. Bystanders must not make any remarks respecting the play during the game.

Although the game of draughts does not require the same amount of judgment and skill as chess, it requires circumspection and caution, and especially demands calculation of the effects of the different moves upon the fortunes of the game. The moves should be calculated mentally, and the men should be kept as much in the centre of the board as possible. The following games will convey a good general idea of draughts, and may be practised with advantage previously to playing with an opponent:—

GAME 1.

No.	Colour.	From	To	No.	Colour.	From	To
1	B	11	15	28	W	30	25
2	W	22	18	29	B	29	22
3	B	15	22	30	W	26	17
4	W	25	18	31	B	11	15
5	B	8	11	32	W	20	16
6	W	29	25	33	B	15	18
7	B	4	8	34	W	24	20
8	W	25	22	35	B	18	27
9	B	12	16	36	W	31	24
10	W	24	20	37	B	14	18
11	B	10	15	38	W	16	11
12	W	27	24	39	B	7	16
13	B	16	19	40	W	20	11
14	W	23	16	41	B	18	23
15	B	15	19	42	W	11	8
16	W	24	15	43	B	23	27
17	B	9	14	44	W	8	4
18	W	18	9	45	B	27	31
19	B	11	25	46	W	4	8
20	W	32	27	47	B	31	27
21	B	5	14	48	W	24	20
22	W	27	23	49	B	27	23
23	B	6	10	50	W	8	11
24	W	16	12	51	B	23	18
25	B	8	11	52	W	11	8
26	W	24	24	53	B	18	15
27	B	25	29	&c.			

White loses.

GAME 2.

No.	Colour.	From	To	No.	Colour.	From	To
1	B	11	15	28	W	30	25
2	W	22	18	29	B	6	9
3	B	15	22	30	W	13	6
4	W	25	18	31	B	1	10
5	B	8	11	32	W	22	13
6	W	29	25	33	B	14	18
7	B	4	8	34	W	23	14
8	W	25	22	35	B	16	30
9	B	12	16	36	W	25	21
10	W	24	20	37	B	10	17
11	B	10	15	38	W	21	14
12	W	21	17	39	B	30	25
13	B	7	10	40	W	14	9
14	W	27	24	41	B	4	15
15	B	8	12	42	W	9	6
16	W	17	13	43	B	2	9
17	B	9	14	44	W	13	6
18	W	18	9	45	B	15	18
19	B	5	14	46	W	6	2
20	W	24	19	47	B	7	10
21	B	15	24	48	W	2	6
22	W	28	19	49	B	10	14
23	B	14	7	50	W	6	9
24	W	32	27	51	B	25	21
25	B	10	14	52	W	31	26
26	W	27	24	53	B	14	17
27	B	3	7	&c.			

Drawn.

DRAWERS.—Receptacles for clothes and other articles called, collectively, a chest of drawers. In order to render them more convenient and serviceable, each drawer should have apportioned to it a certain class of articles, one being confined to heavy articles, such as sheets, towels, &c., another to wearing apparel, another to lighter materials; so that there can never be any difficulty in finding any particular thing when required. In purchasing this article of furniture, it is always wiser economy to select them made of the best materials and of proper construction; the purchaser taking care not to trust alone to the mere outward appearance, by opening and shutting the drawers to test their fitness, examining and trying the locks, &c. Thus selected, drawers will last for many years, and never need repair.

DRAWING, ARTISTIC.—Books: *Burn's Prospective Drawing*, 2s.; *Harding's Drawing Book*, 2s.; *Child's Advanced Drawing Book*, 7s. 6d.; *Child's Elementary Drawing Book*, 7s. 6d.; *Harriet Bolton's Drawing Book*, 7s. 6d.; *Tate's Drawing Book for Boys and Girls*, 1s. 6d.; *Dibdin's Copies*, 2s. 6d.; *Howard's Human Figure*, 4s.; *Harley's Progressive Landscape*, 7s. 6d.; *Cooper's Animals*, 10s. 6d.; *Child's Figures*, 1s. 6d.; *Andrew's Flowers*, 9s.; *Grundy's Shipping*, 9s.; *Barnard's Trees*, 7s. 6d.; *Child's Objects*, 7s. 6d.; *Houlston's Exercises—Light, Shade, and Colour*, 3s. 6d.; *Weigall's First Principles*, 1s.; *Williams's Drawings from Models*, 3s.; *Minifie's Geometrical Drawing*, 21s.; *Hassell's Drawing in Water Colours*, 5s.; *Krusi's Inventive Drawing*, parts, 2s. 6d.; *Sopwith's Isometrical Drawing*, 12s.; *Harley's Drawings in Pencil and Chalk*, 1s.; *Taylor's Lineal Drawing*, 5s. 6d.; *Hullamandel's Drawing on Stone*, 7s. 6d.; *Robinson's Outlines*,

7d.; *Deacon's Perspective*, 4s.; *Malan's Aphorisms*, 3s. 6d.; *Ruskin's Elements*, 7s. 6d.; *Rinn's Mechanical and Engineering*, 9s.; *Burn's Ornamental*, 2s.; *Waagen's Collections*, 18s.

DRAWING-ROOM.—This being the ordinary sitting-room of the ladies, and what may be termed the state apartment of an establishment, much taste and refinement are required in decorating and furnishing it. The prevailing tone should be that of lightness combined with richness, and the carpets, curtains, hangings, and furniture generally should be contrasted so as to form a harmonious whole. The view from the drawing-room should be pleasing and picturesque, and will be considerably heightened through the medium of a bow-window. Settees, sofas, ottomans, &c., should be arranged round the room in the most convenient manner. A large round table should occupy the centre of the room, on which books, prints, &c., may lie, for the amusement of the company; card-tables, chess-tables, fire-screens, flower stands, &c., complete the decorations. The arrangement of the multitudinous furniture and ornaments must be left to the taste of the lady of the house. The chief thing to be avoided in the disposition of the articles is a vulgar, crowded effect; everything should seem to contribute to comfort or amusement, and there should be nothing superfluous.

DREAMS may be defined as those trains of ideas which occupy the mind, or those imaginary transactions in which it is engaged during sleep. Although the consideration of the phenomena in connexion with dreams has engaged the attention of some of the profoundest minds, it has not yet been satisfactorily accounted for, some slight connexion being established between cause and effect, and the remainder resolving itself into surmise and conjecture. One thing is certain, which is that, generally speaking, during perfect health dreams are but faintly remembered if at all, whilst in sickness they become intensified, and dwell upon the memory long after the waking sense has returned. It is also feasible to suppose that dreams are, to a certain extent, influenced previously by the state of the mind or the condition of the body: thus, if a person retire to rest immediately after quarrelling with some person, his dreams will, in all probability, be influenced by the event that immediately preceded sleep. Also, if a person eat a hearty supper, and retire to rest immediately afterwards, the chances are that he will experience frightful dreams. The powerful effects of terrible dreams both upon the mind and the body are frequently serious and lasting, whilst the sleep that accompanies them fails to effect its office of soothing the mind and nourishing the body, and gives a person upon waking that unfreshed and languid sensation which every one must have felt at times. It is therefore important to secure, if possible, pleasant dreams, and although no absolute recipe can be given to secure this boon, still they may, in a great measure, be obtained by exercising a watchful care over the passions and appetites during our waking moments.

DREDGING.—1. Flour mixed with grated bread. 2. Sweet herbs dried and powdered. 3. Minced sweet herbs, butter, and claret, especially for mutton and lamb. 4. Water and salt. 5. Cream and melted butter. 6. Yolks of eggs, grated biseuit, and juice of oranges.

DRESS.—See APPAREL, APRON, BOOTS, COAT, HAT, TROUSERS, WAISTCOAT, &c.

DRESSES.—These articles of wearing apparel are best preserved in drawers and wardrobes, especially the latter, where they may be put away without rumpling and creasing. When they are taken off they should be well shaken, to free them from the dust, &c., contracted in the wearing. The dress that is worn out of doors should be exchanged for an older and easier garment to be worn indoors; a proceeding that will not only conduce to comfort, but tend to preserve the dress considerably longer than if worn indiscriminately.

DRESSES FADED, TO BLEACH.—Wash the dress in hot suds, boil it and rinse it, then dry it in the sun. Should it not be rendered perfectly white, let it remain in the sun for several days.

DRESSING-ROOM.—This apartment, as its name implies, is called into requisition when making the toilet; it should be furnished therefore with every imaginable convenience in connexion with the various operations of the toilet, and rendered as comfortable as possible. It should be situated as near the bed-room as the general arrangement of the house will allow, and if possible it should communicate directly with the sleeping apartment. Dressing-rooms are not only conducive to comfort, but to health, as the ablutions and frictions of the body must necessarily be more effectively performed in an apartment where there is fresh air than in one where the atmosphere is vitiated by the breath of the sleeper during the night.

DRESSINGS, SURGICAL.—These consist chiefly of liut, bandages of all sorts and lengths, some fine cotton or wool, adhesive plaster, oilskin to cover wounds, sponges, and a few simple instruments, merely sufficient for the purpose of dressing the ulcers or wounds that may call for attention.—See BANDAGE.


DRESS-MAKING.—When dresses are made by the wearer herself, or under her immediate supervision, they cost less than when given out to make; but at the same time so good a style and fit are seldom secured as professed dress-makers accomplish. Everything depends upon a lady's taste, and if she be very apt she may, by the aid of paterus, become an accomplished artist. Books: *Dressmaker and Milliner*, Houlston's *Industrial Library*, 1s.; *Hood's Dressmaking Handbook*, 5s.; *Ladies' Handbook of Dressmaking*, 1s.; *Adams's How to Make a Dress*, 1s.; *Adams's Dress for Ladies*, 1s.

DRIPPING.—This well-known article of culinary use may be considerably economized by judicious management. During the first hour of roasting, the dripping-pan may be emptied once or twice, and abundance left for basting. Dripping put aside in this manner will be much fitter for all culinary

purposes than that which has acquired a rank taste, either from burning cinders or being exposed to the action of a fierce heat. Dripping may be clarified as follows:—Put it into a pan with plenty of cold water, let it boil for a quarter of an hour, strain all together through a sieve; next day take the fat off the top carefully, and scrape the under side; repeat this boiling twice more, then put it into pans, quite free from water, and tie it over.

DRIVING.—The art of driving consists of a few simple rules. 1. Always keep to the left or *near* side, except when passing another vehicle, which you do on the right or *off* side. 2. Do not turn sharply round corners, but give a full sweep, so as to allow room for any vehicle coming in an opposite direction. 3. When you pull up or turn round, intimate your intention by holding up your hand or whip, so that those behind you may be made aware of the fact. 4. When going down hill, hold the reins tightly, as that will in some measure support the horse; when going up hill, the reins may be held slacker; at all times, however, the reins should be held in the hands with moderate firmness, so that you may check a horse on the instant when he stumbles. 5. Do not employ the whip too frequently, or tug capriciously at the reins; such treatment not only spoils a horse's temper, but renders him callous and indifferent to your command. 6. A horse will go a greater distance in a shorter space of time, and with less distress to himself, if driven at a moderate pace throughout, instead of galloping one moment, and being compelled to subside into a walk the next. 7. When a horse has the habit of shying, draw him gently aside from any startling object as you approach it; also hold the whip on the shady and not the sunny side of his body. 8. If a shoe gets loose or comes off, have it rectified as soon as possible, instead of walking till you reach home; both the animal and yourself will perform the remainder of the journey with greater ease and comfort, and an attack of lameness may be prevented. 9. If a horse runs away, do not abandon all controul over him, but continue to guide him as if he were going at an ordinary pace; generally speaking, the horse will yield mechanically to the rein, and thus danger may be escaped. 10. Treat a horse generally with gentleness and kindness, stroke his neck occasionally with the whip, pat his back, and now and then call to him by his name. Horses invariably express their gratification at these little attentions by their gestures, and renew their efforts and increase their pace, as a sort of grateful acknowledgment to the driver.

DROP CAKES.—Beat to a cream twelve teacupfuls of sugar and one teacupful of butter; add five eggs well beaten, a saltspoonful of salt, four teacupfuls of sifted flour, and one teacupful of milk; beat all well together, and drop it on buttered paper in small cakes; bake them for twenty minutes.

 Sugar, 12 teacupfuls; butter, 1 teacupful; eggs, 5; salt, 1 saltspoonful; flour 4 teacupfuls; milk, 1 teacupful.

DROPS, IN CONFECTIONERY.—See ACIDULATED, APRICOT, BARBERRY, CHOCOLATE, CURRANT, GINGER, LEMON, PEPPERMINT, RASPBERRY, &c.

DROPSY.—Dropsies, though generally regarded as special diseases, are in fact only affections consequent on some organic disease or state of high functional derangement, either of an inflammatory or febrile character; such as disease of the kidneys, liver, or intestines, or from scarlet fever, or it may result from debility; the immediate cause appearing to reside in some pressure on the veins and absorbents. The general symptoms of dropsy are, loss of appetite, red tongue, dry skin, difficulty of breathing, cough, checked secretions, and either general or partial swelling, which on being pressed leaves pits in the cuticle; besides which there is much thirst and the skin is of an unnaturally pale colour. The treatment of dropsy must depend upon the organ and the form of disease that has given rise to the dropsy, the two chief objects to be aimed at being first to equalize the circulation, and next to promote the absorption of the effused serum.

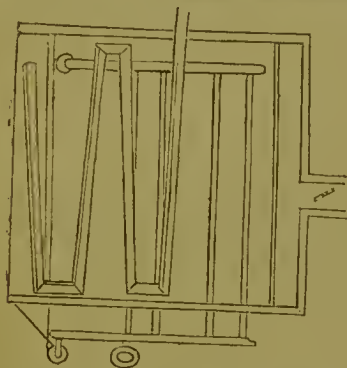
DROWNING.—A person taken out of the water should be carried, with the face downwards, as gently as possible to the nearest house, the body well dried and placed in a heated bed, with bottles of hot water applied to the feet, groins, and arm-pits; the mouth should be cleansed of all mucus, and the lungs inflated with air, as recommended in suspended animation; apply beaten bricks or electricity to the spine, and when swallowing is restored, some wine and water, or gruel with a little brandy, is to be administered. Or respiration may be attempted by one person with both hands pressing down the chest, while another in like manner presses up the belly, continuing this alternate process as long as there is any reasonable hope of benefit accruing. Another process is that of placing the body well dried on its side, and exciting the lungs by a steady but gentle pressure upon the abdomen, reversing the body from side to side; while along with these means the patient is to be kept constantly hot with bricks or bottles of water, giving, as in the former instance, the warm stimulant as soon as the stomach is capable of receiving it.

DRUGGET.—A coarse woollen cloth, supplying a cheap carpet. They are chiefly used for bedrooms, stairs and passages, and also for covering other carpets.

DRUGS.—To preserve these more surely, they should be kept in well stoppered bottles. All vegetable medicines lose their virtues in the course of a few months, if not carefully closed from the air, and even in bottles they seldom keep good for a year. It is, therefore, desirable to purchase them in small quantities at a time, and to renew them at intervals of twelve months. Tinctures will keep for a much longer time; but even they, in the course of years, lose a portion of their properties; though, at the same time, as the spirit evaporates, they become more concentrated, and consequently stronger in a given quantity, until their

virtues become lost by keeping. All drugs should be kept in a receptacle made expressly for them, with each ingredient distinctly labelled on every bottle or package; by this means they will always come ready to hand, and the liability to make a mistake will be considerably lessened.

DRYING CLOSET.—A receptacle for drying clothes within doors, in connexion with the laundry and washhouse. By this means the health and comfort of those employed are greatly promoted, by their being almost entirely free from the pernicious



effect of damp vapour, and in not being inconvenienced with great heat in hot weather; the linen, also, is kept quite free from smoke and dust. The drying closet may be eight feet by six feet, and may contain four wooden horses, each with five rails or bars. Each horse runs in and out of the closet upon two small iron wheels, upon an iron railway. One such horse will hold six shirts, or a proportionate quantity of other linen, and the whole will dry off as much and as speedily as six women can wash in succession. Or the drying closet may be limited in its capacity to two horses only, and the heat may be sufficient to dry the linen in an hour.

DRYING CLOTHES.—When clothes are hung out to dry, great care should be taken to avoid palings, or any materials that may communicate a stain, particularly iron, as this will cause iron-moulds. All articles intended to be white should be hung in the sun as much as possible, and when they acquire a bad colour, and require a kind of bleaching, they are best laid out on the grass, and prevented from blowing away by placing clean but heavy stones on them. Dyed and printed articles should never be hung in the sun, but dried in the shade; a shed or other sheltered place may therefore be selected for this purpose. Some articles require particular modes of hanging them up to dry. Very thick articles, as quilts, waistcoats, &c., are best hung over two lines placed a few feet apart, in order that both sides may be sufficiently exposed to the air. The summer months are best for washing thick and heavy articles of furniture, as blankets, counterpanes, bed curtains, &c., on account of the greater facility with which they may be dried out of

doors in that time of the year, and thus, also, acquiring a better colour. Laces and veils require to be stretched smooth and tacked to a piece of white calico, before they are hung up. Muslin and other dresses must be stretched as smooth as possible, to prevent their becoming wrinkled in drying.

DRY ROT.—A process of decay that timber undergoes through being imperfectly seasoned or improperly ventilated. The maintenance of this ventilation when the house is finished will depend upon the judicious introduction of openings in the side walls, under all the floors, and under the eaves of the roof, for the admission of a free current of air. A circulation between the roof of a house and the ceiling of the uppermost room is maintained by small openings directly under the eaves, or by very small windows, loopholes, or slits in the gable ends. A circulation is promoted under the floors of the different stories of a house by the introduction of small iron gratings in the walls, communicating with the vacancies between the floors and the ceilings. One of the best preventives of dry rot is as follows: Melt twelve ounces of rosin in an iron pot; add three gallons of train oil and three or four rolls of brimstone, and when the brimstone and rosin are melted and become thin, add as much Spanish brown, or red and yellow ochre, or any other colour required, first ground fine with the same oil, as will give the desired shade; lay this on with a brush in a hot state and as thin as possible; some time after the first coat is dried, put on a second. This preparation will preserve timber for many years, and prevent the weather from penetrating through brickwork.

DRY STOVE.—A stove used in horticulture, chiefly devoted to the culture of succulents. In design, it need not differ from the greenhouse, unless, perhaps, in the stage being placed somewhat nearer the roof. The volume of air to be heated by one fire in the dry stove should not exceed two-thirds of that to be heated in a greenhouse or conservatory similarly constructed and situated.

DUCK BOILED.—Make a paste, allowing half a pound of butter to a pound of flour. Truss a duck as for boiling; put into the inside a little pepper and salt, one or two sage leaves, and a little onion finely minced; enclose the duck in the paste, with a little jellied gravy. Boil it in a cloth, and serve it with brown gravy poured round it.

DUCK BRAISED.—Lard two young ducks, and place them in a braising-pan with a slice of ham, a few onions, a bay leaf, pepper and salt, and a little stock; close the pan, and let it stand over a gentle fire till done; serve them with their own liquor. Morels, capers, and artichoke bottoms may be added.

DUCK HASHED.—Cut up the remains of duck into neat pieces, and put into a stewpan with a tablespoonful of flour; mix well, moisten with a glass or two of wine, and sufficient broth or water to make a somewhat thick sauce; season well, add mushroom ketchup, a little sugar and cay-

enne pepper; let it simmer, but not boil; take out the pieces, which dress upon toast, reduce the sauce, pour over and serve.

DUCK PIE.—Cut off the wings and neck of a duck, boil it for a quarter of an hour, cut it up while hot, save the gravy that runs from it; then take the giblets, add anchovies, a little butter, a blade of mace, six black pepper corns, two onions, a bit of toasted bread, a bunch of herbs, and a little cayenne pepper. Stew them till the butter is melted, then add half a pint of boiling water, and let them stew till the giblets are tender; then strain it, and put the giblets into the pie. Let the gravy stand till cold, skim off the fat, and put it with what runs from the duck at the bottom of the dish; then put in the duck well seasoned with pepper, salt, and butter, and cover with a short crust. Bake in a moderate oven until of a bright brown.

DUCK RAGOUT.—Half roast a duck, then score the breast in three places at each side, lightly strew mixed spices and cayenne into each cut, and squeeze lemon juice over the spices. Stew the bird till tender in good brown gravy; take it out and keep it hot; add one or two finely-shred shallots to the gravy, also a glass of red wine, and pour the gravy over the duck. Wild fowl and any sort of game may be re-warmed, after being cut up, in good gravy boiling hot and thickened with bread crumbs, seasoned with salt, and spices to taste.

DUCK ROASTED.—Put into its body a seasoning of parboiled onions mixed with minced sage, salt, pepper, and a slice of butter. Place it before a brisk fire, but not sufficiently near to be scorched; baste it constantly, and when the breast is well plumped and the steam from it draws towards the fire, dish, and serve it quickly with a little good brown gravy poured round them, and some also in a gravy tureen. Young ducks will take about half an hour to roast, full-sized ones from three quarters to an hour.

DUCK STEWED, WITH PEAS.—Truss a duck with the legs turned inside, which put into a stewpan with two ounces of butter, and a quarter of a pound of streaked bacon, cut into small slices; set the stewpan over a moderate fire, occasionally stirring its contents until it becomes lightly browned, then add a tablespoonful of flour, and when well mixed a pint of stock or water, stir occasionally until boiling, when add twenty of the smallest sized onions, and a bunch of parsley, with a bay leaf; let the whole simmer for a quarter of an hour longer, or until the peas are quite tender, when take out the duck, draw out the string, and dress it upon the dish; remove the parsley and bay leaf, season the peas and sauce with a little pepper, salt, and sugar, pour over the duck, and serve.

DUCK, STUFFING FOR.—Chop very finely about two ounces of onion, of green sage leaves about an ounce (both unboiled), four ounces of bread crumbs, a bit of butter about the size of a walnut, the yolk and white of an egg, and a little pepper and salt.

DUCK, TO CARVE.—After cutting a few slices off the breast, the legs should be removed, which is done by cutting in the direction 1, 2, 3; then the wings, 4 to 1; and



the merrythought, 5 to 6. Then displace the spine, according to the line of 7, 2, 3. Under this is the seasoning, part of which must be served to each guest. To take off the wings, insert the fork in the small end of the pinion, and press it close to the body; then put in the knife, and divide the joint down. Beside the wings there are two side-bones, which should be taken off, as also the back and lower side bones.

DUCK, TO TRUSS.—Clear the skin entirely from the stumps of the feathers, cut off the neck close to the back, leaving the skin of the neck long enough to turn over the back. Pull out the throat and tie a knot at the end. Loosen the liver and other matters at the breast end with the middle finger, and cut it open between the vent and the adjacent parts. Draw out all the entrails except the soul, wash the inside of the bird by pouring water through it, and wipe the outside with



a dry cloth; beat the breast bone flat with a rolling pin, put a skewer into the wing, and draw the legs close up; put the skewer through the middle of the leg, and through the body, and the same on the other side. Cut off the end of the vent, and make a large hole, by which means the seasoning will be kept in more securely. The engraving represents the back and breast of the duck when trussed.

DUCKS, TO CHOOSE.—If ducks are fat they are hard and thick on the belly. If fresh killed the legs are limber, if stale, the feet are dry and stiff. The feet of tame ducks are thick, and inclining to a dusky yellow; wild ducks have smaller feet than tame ones, and of a reddish colour.

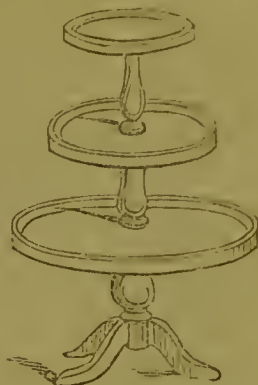
DUCKS, TO REAR.—There are many varieties of the tame duck, and many foreign kinds have been brought to this country. The most in request is the dark-coloured Rouen, originally from France, which is very prolific in eggs. The English or Aylesbury white variety is also considered valuable, as

large and profitable. The Muscovy duck, as seen in the engraving, is a distinct species, much larger than the common duck, and distinguished by a sort of compounded membrane of a red colour, covering the cheeks and extending behind the eyes. This kind is easily fattened, and is a profitable breeder. The tame duck will lay from eleven to fifteen eggs, and she sits for thirty or thirty-one days. If the eggs are not of the duck's own laying, they should be all of the same colour as her own, as she will sometimes turn out of her nest those of a different shade, or those belonging to other ducks. During incubation, or sitting, food must be placed beside her, and an opportunity may be sometimes afforded her of going into the water for a short period. Sometimes a duck will leave her eggs for so long a time that they will become quite cold and unfit for hatching, at other times she will take the precaution of covering them with hay, straw, or leaves, before she quits them. When the ducklings are hatched, there is no necessity for removing them; they are hardy, and



may be left to the care of the parent. In fine weather, as soon as all are hatched, they may be allowed to run on the grass, the duck being confined under a coop, with food made of oatmeal, or barley meal in water, near at hand. When the ducks grow large they may be fed upon oats (never barley), which should be bruised; to which may be added pea-meal, some broth, chopped vegetables; such as carrots, turnips, potatoes, and lettuce, of which latter they are particularly fond. Ducks are the least expensive of any domestic fowl to keep, for if allowed to have their liberty, they will succeed in finding food for themselves; when, however, they are intended for the table, they should be confined some weeks previously, and fed as before stated, as they have gross appetites, and feed upon any garbage they meet with, which imparts a rank and disagreeable flavour to their flesh. Ducks may also be reared by placing the eggs under a hen, who will tend them with the same care as though they formed part of her own brood.

DUMB WAITER.—A well-known piece of furniture formerly much in use, and ex-



tremely convenient; the shelves should be made to turn round, which renders them still more serviceable.

DUMPLINGS.—See APPLE, CURRANT, NORFOLK, SUFFOLK, SUET, YEAST, &c.

DUST-BIN.—A place for containing the dust, and other refuse formed in carrying on the business of the house. It should, if possible, have a northern exposure, and be furnished with a door, to exclude smells. Attached to every dwelling there ought, properly, to be two distinct places for dust or refuse; one for vegetable and animal matters, dust, ashes, &c., which are convertible into manure; and another (which may always be of much smaller size) for broken earthenware, glass, stones, &c., which are of no use, except for the bottoms of roads or walks, or for grinding into powder, to be used for forming cement or anticorrosive paint. Few materials thrown into a dust-hole produce more offensive and dangerous smells than recent bones, from the decomposing animal matter remaining on their surface; and it is always better to throw in some sifted ashes from the fire-place along with them; because the ashes, by absorbing the decomposing matter, prevent it from giving out an offensive smell. In whatever way the dust, ashes, bones, and vegetable refuse of a house are kept, as little moisture as possible ought to be admitted with them, as this promotes putrefaction. In country cottages, the dust-hole and the dung-heap are most frequently combined; and as the water, which in suburban town-houses is usually poured down the sink, is thrown into this pit, a very excellent manure is produced. In order that this manure pit may be as little injurious to health as possible, it should be some yards' distance from the cottage; and, in warm weather it should be covered with boards, or even with a straw hurdle, to prevent evaporation, and the diffusion of noisome smells.

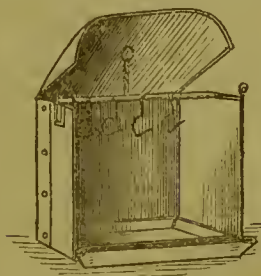
DUSTING.—A domestic operation which follows sweeping, after an interval sufficiently long has elapsed to allow the dust to settle. The window curtains, which have

been lifted up from the floor when the room was being swept, should now be released, opened, shaken, brushed with the proper brush, and properly arranged over the hook or bands for the day. Tables, sofas, chairs, &c., are then to be carefully dusted and arranged. Ledges of wainscots, panels of doors, and window-panes must be swept with a small brush. Specimens and pictures with gilded frames, must be brushed with feathers or silk dusters. Chimney-piece ornaments must be carefully removed, and the chimney-piece either wiped free from dust, or washed with cold soap and water; the ornaments before being replaced must be carefully wiped with a fine linen duster. Bedrooms require a thorough dusting every day.

DUTCH CAKE.—Mix five and a half pounds of flour, one pound of butter, one and a half pounds of sugar, one and a quarter pounds of raisins, one pound of currants, five eggs, one nutmeg, thirty-six cloves, one ounce of cinnamon, one tablespoonful of allspice, two wineglassfuls of brandy, three tablespoonfuls of rose water; three pints of milk, a saltspoonful of salt, and yeast enough to raise it.

Flour, 5½ lbs.; butter, 1½ lb.; sugar, 1½ lbs.; raisins, 1½ lbs.; currants, 1½ lb.; eggs, 5; nutmeg, 1; cloves, 36; cinnamon, 1oz.; allspice, 1 tablespoonful; brandy, 2 wineglassfuls; rosewater, 3 tablespoonfuls; milk, 3 pints; salt, 1 saltspoonful; yeast, sufficient.

DUTCH OVEN.—A miniature roasting and toasting apparatus, designed for cooking small things, which could not well be cooked



by means of the spit, or the ordinary oven; they are suspended to the bars of the grate, and the books with which they are furnished are moveable, so that what is being cooked may be turned.

DUTCH PUDDING.—Mix two pounds of flour with a pound of butter, melted in half a pint of milk; add to this eight eggs, with the whites and yolks separately beaten, half a pound of fine sifted sugar, a pound of clean currants, and thirty chopped almonds. Put to this four tablespoonfuls of yeast, cover it up for an hour or two, and bake it for an hour in a wide shallow dish. When cold, it eats well sliced, as a sort of cake.

Flour, 2 lbs.; butter, 1 lb.; milk, ½ pint; eggs, 8; sugar, ½ lb.; currants, 1 lb.; almonds, 30; yeast, 4 tablespoonfuls.

DUTCH RUSKS.—Take three pounds of flour, half a pound of butter, a quarter of a pound of sugar; mix half a pint of new milk with a quarter of a pint of yeast, rub the flour, sugar, and butter together; set sponge with the milk; when risen, work up the dough, and make it into small balls; bake on tins in a moderate oven for a quarter of an hour; next day out them in two and dry them in the oven.

Flour, 3 lbs.; butter, ½ lb.; sugar, ½ lb.; milk, ½ pint; yeast, ½ pint.

DUTCH SAUCE.—Mix well together half a pound of butter, two tablespoonfuls of flour, and the yolks of six eggs; put this paste into a saucepan with some salt, whole pepper, the juice of three lemons, and a quarter of a pint of water; stir it over the fire until it is sufficiently thick, and serve with fish and vegetables.

Butter, ½ lb.; flour, 2 tablespoonfuls; eggs, 6 yolks; salt, and whole pepper, to season; lemon, juice of 3; water, ½ pint.

DYEING.—This process should, generally speaking, be intrusted to a person who makes it his profession; the following hints, however, will be found useful: pour the colour desired into water as hot as the hand can bear it; pass the stuff to be dyed through this water as often as necessary for it to imbibe the colour perfectly; take care not to squeeze or express it. Next, hang the stuff up till it is quite cold, which will only require a few minutes, then plunge it into two pailfuls of soft water, and afterwards in one of hard, and before hanging it up to dry, pass it through a little alum water; the process is terminated by pressing or ironing out the stuff before it is thoroughly dry.—See BLACK, BLUE, BROWN, GREEN, RED, YELLOW, &c.

DYSENTERY.—This is a disease more common in hot climates than cold ones, and both in its type and character approaches much more nearly than any other disease, to cholera. Dysentery is either the result of a congestive state of the bowels, or it proceeds from a chronic inflammation of the lining membrane of the colon.

Symptoms.—Dysentery commences with shivering, a gripiug flatulent state of the bowels, frequent discharges of mucus, or blood and mucus, and often blood alone; with loss of appetite, sickness, fever, and great debility.

Treatment.—When depending on inflammatory action, it is necessary to bleed and give cooling drinks with an emetic. In ordinary cases the treatment should begin with the warm bath or fomentations, with three grains of calomel, one grain of opium, and three grains of assafoetida pill; the whole made and divided into two pills, which are to be taken every six hours, and a starch injection with assafoetida tincture twice a day. As the symptoms improve, tonics are to be given, at first mild, and gradually increased in strength, and combined with wine and a soft unexciting diet.

DYSPEPSIA, or indigestion, is that impaired condition of the stomach when the food is only half or imperfectly digested; producing want of appetite, a sense of disten-

sion, debility, headache, languor, want of sleep, and all those constitutional symptoms that usually attend an overtaxed and weakened stomach.

Treatment.—To effect a perfect restoration in the tone of the stomach, an entire change in the mode of diet is absolutely necessary, also in the habits and pursuits of the patient; the stomach must first be emptied and slightly stimulated by an emetic, or by a few alterative doses of blue pill and rhubarb, and the system submitted to a regular course of such tonics as infusion of camomile with carbonate of soda, gentian with potass, and, after a time, infusion of quassia with a few drops of muriatic acid. The food should be at first light and simple, and comprise the most solid aliments, and such as will compel a long mastication before swallowing; all drinks or stimulants with the meal being strictly prohibited till the salivary glands yield of themselves enough saliva to macerate the food; and this can only be effected by a long and perfect mastication.

E.

EAR, AFFECTIONS OF THE.—The delicate yet important organ of the ear is subject to many diseases and accidents. The most frequent mischief to which the *external* part of the organ is subject, is partial or complete loss of the cartilage or shell of the ear, a result that either follows sabre cuts, gunshot wounds, or sloughing from blows or pressure. Inflammation seldom attacks the external parts, or, if it does, is in general of an erysipelatous character. When the cartilage has been lacerated, or part of its structure destroyed, the separated parts are to be placed as near as possible in their natural position, and kept together by two or three stitches, a warm moist poultice laid over the part, and a light bandage passed round the head to keep the dressing in its place. The external ear is also frequently the seat of serofulous ulcers and ill-conditioned sores, and the skin behind the ear is particularly liable to small encysted tumours, which are very tedious in their suppuration, and cause considerable pain and inconvenience. The treatment is nearly the same for all these affections; a course of alterative and tonic medicines, a warm bran or bread poultice night and morning on the part, and when the discharge is fetid and thin, a lotion made by dissolving two grains of nitrate of silver in an ounce of rose or distilled water, is to be used as a wash to the sores, once or twice a day; in very obstinate cases a small blister applied to the nape of the neck will speedily effect a cure, though in general, cleanliness, attention to the diet, and an alterative and tonic course of medicine, will effect a sure and far more satisfactory cure than can be obtained by any counter-irritant remedy that can be

used. *Ear-ache* is a very painful affection of the auditory passage, consequent on cold or a slight degree of inflammation in the membrane of the ear; in all such affections the soothing system will be found the best and safest practice, and this consists of a little cotton dipped in oil with a few drops of laudanum placed in the ear, and a warm bran poultice over all, repeating the poultice every two hours; when, however, the pain is more intense, apply a leech below or behind the ear, and promote the bleeding by poultices.

EAR, FUNCTIONS OF.—By the function of hearing is understood the collection by the external ear of the waves of sound, their conveyance along the auditory passage to the tympanum and vestibule, and through the labyrinth of the internal ear to the filaments of the auditory nerve, distributed, or more properly expanded, over the membranous lining of the parts, and by these again conveyed to the brain for appreciation. To make this more intelligible, it must be understood that sound travels in undulating waves or tremors, which being received and collected by the shell-like cartilage of the ear, are transmitted in the same undulating currents to the drumhead or tympanum, a fine membrane-like parchment, that divides the external from the internal ear, and which being struck by the vibrations of sound, communicates its motion to an apparatus of four very small bones, which in their turn pass the vibration to the fluid contained in the tortuous canal or labyrinth, on the lining membrane of which is diffused the termination of the auditory half of the seventh pair of nerves; these sentient extremities receiving from the agitated fluid the impression of the sound, bear it along the trunk of the nerve to its seat of origin in the brain, where another function of the sensorium translates the impression into a definite meaning.

EARLY RISING.—The habit of early rising is important in both a physical and pecuniary point of view. No person who indulges in lying in bed late can be positively healthy, for, after the body has received its due amount of nourishment, every moment it lies in the heated and vitiated atmosphere only tends to relax the system and enervate the frame. If a person be in perfect health, he ought not to lie in bed later than six o'clock in the summer and seven in the winter, that is, supposing he goes to rest at a reasonable hour, say eleven or twelve o'clock. Early rising, however, requires resolution and a strength of will to put it in practice persistently, and in many cases it is necessary to have recourse to certain ingenious devices to aid the efforts of the would-be early riser, and to counteract the effects of sloth and irresoluteness. One person who relates his experience in this way, had a string attached to his bed-clothes, communicating with the room of some watchful servant, who at a certain hour in the morning denuded his master, and compelled him to rise in self-defence. Another person had a basin of cold water put immediately by the side of, and on a level with

the bed, so that at the hour for rising, he might turn his face over and immerse it in the water, which had the immediate effect of thoroughly awaking and refreshing him. One thing is certain, and that is, that no person can be an early riser unless he acts promptly, for if he lies in bed and keeps promising himself that he will get up in a few minutes, he is sure to deceive himself and lie till a late hour; therefore a person should step from his bed at once; the shock is but momentary, and must be experienced at whatever hour a person rises. The sacrifice which a person makes both to his worldly prospects, his moral welfare, and his health, by habitually lying in bed to a late hour, and, on the other hand, the advantages and pleasures to be derived from early rising, must be sufficiently obvious, and are borne out by the fact, that all persons who have risen to wealth and eminence by their own unaided efforts, and all those who have lived to a good old age, retaining their bodily and mental vigour to the last, have been during the whole course of their life habitually early risers.

EARTHENWARE.—The various wares known as china and earthenware are all compounds of clay with bone-earth, flint, and other similar materials, ground together and baked. According to the proportion of the clay will be the solidity of the china and the capability of being moulded; while the flint gives hardness, whiteness, and transparency, and the bone-earth increases those qualities. The chief kinds of china used in the present day are the Oriental, Dresden, Sevres, several French kinds, and English varieties, made principally at Worcester and in the potteries of Staffordshire.

EARTHENWARE, TO CLEAN.—Earthenware articles may be washed in hot water, with the addition occasionally of a little soap, and the use of a brush. They should also be rinsed in clean water and dried with a linen cloth. A wooden bowl or tub should be used, to prevent cracking or chipping the brittle material.

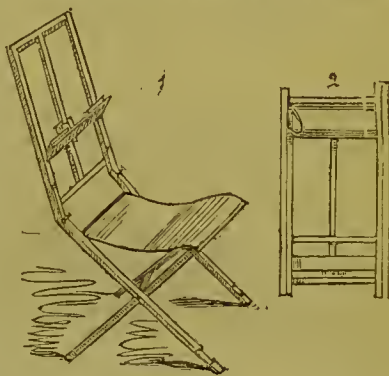
EARTHENWARE, TO REPAIR.—See CEMENT.

EARTHWORMS.—Unless these exist in large numbers, they are not very destructive, but, on the contrary, by perforating the ground in every direction, and preparing it to receive air and moisture, materially facilitate vegetation. When, however, they are so numerous as to leave traces of their ravages on the surrounding plants, they may be destroyed as follows:—Dissolve in water three parts of quick lime newly made, and two parts of soap boilers' lye, or potash dissolved in water; pour this into the holes which the earthworms infest, when they will immediately emerge to the surface, and after a few moments languish and die.

EARWIG.—A very destructive insect to flowers and plants, and their ravages are especially committed upon the petals of roses, pinks, dahlias, &c. They may be captured by driving sticks into the ground, and placing on each an inverted flower-pot; the earwigs will climb up to find refuge under it, and may be taken out and killed.


Clean bowls of tobacco-pipes placed in like manner on the tops of smaller sticks are very good traps; or very deep holes may be made in the ground; into these they will fall, and may be destroyed by boiling water.

EASEL.—A rest employed by artists for the canvas they are painting on. A portable





easel, for the use of artists out of doors has recently been introduced; this contrivance also combines a seat for the artist, and when not in use may be folded into a compact form. *Fig. 1* represents an easel of this kind open. *Fig. 2* illustrates the same implement closed.

EAU DE BOUQUET.—Take two ounces each of storax, lemon-peel, and nutmeg; six ounces each of coriander and calamus aromaticus; one ounce and a half of cloves; four ounces of iris of Florence; half an ounce of essence of bergamot; a drachm of essence of lemon, a drachm of rosemary; fifteen drops of otto of roses; a quarter of a drachm of ambergris; half a drachm of vanilla; three gallons and a half of spirits of wine; and a quart of orange-flower water. Bruise all the solid substances, except the amber, the iris, and the vanilla, and infuse them in the spirits of wine for several days; then distill, and add to the product the amber, vanilla, and iris; infuse them for several days, then filter the mixture, and add the orange-flower water. When used as a cosmetic, this mixture must be greatly diluted with water.

 **Storax, 2ozs.; lemon-peel, 2ozs.; nutmeg, 2ozs.; coriander, 6ozs.; calamus aromaticus, 6ozs.; cloves, 1½oz.; iris of Florence, 4ozs.; bergamot, ½oz.; essence of lemon, 1 drachm; rosemary, 1 drachm; otto of roses, 15 drops; ambergris, ½ drachm; vanilla, ½ drachm; spirits of wine, 3½ gallons; orange-flower water, 1 quart.**

EAU DE COLOGNE.—This favourite perfume may be compounded in a variety of ways; the following are some of the most approved:—

 **1. Oil of neroli, citron, bergamot, orange, and rosemary, 12 drops each; cardamom seeds, 1 drachm; spirits of wine, 1 pint; infuse for a week.**

 **2. Rectified spirits of wine, 4 pints; oil of bergamot, 1 oz.; oil of lemon, ½oz.;**

oil of rosemary, $\frac{1}{2}$ drachm; oil of neroli, $\frac{3}{4}$ drachm; oil of English lavender, 1 drachm; oil of oranges, 1 drachm; mix well and filter.

3. Essence of citron, 2 drachms; essence of hergamot, 2 drachms; essence of cedrat, 1 drachm; essence of lavender, $\frac{1}{2}$ drachm; essence of orange-flowers, 10 drops; tincture of musk, $\frac{1}{2}$ drachm; tincture of benjamin, 3 drachms; otto of roses, 2 drops; proof spirit, 2 piuts. Mix and filter.

4. (*Farina's*.) Infuse in a quart of spirits of wine a piece of benzoin about the size of a filbert, and a drachm and a half of cardamom seed; when these have stood forty-eight hours, add half an ounce of animal charcoal, shaking the bottle well, and when it has stood for an hour filter it through blotting paper; when filtered add a drachm and a half of bergamot, half a drachm of oil of rosemary, two drachms of essence of lemon, half a drachm of oil of lavender, fifteen drops of neroli, and two drops of oil of cloves; shake these together, and filter again.

EBONY.—A wood naturally of a deep black colour, exceedingly hard, heavy, and durable. An imitation of ebony is made by steeping pale-coloured woods in a decoction of logwood or galls, allowing them to dry, and then washing them over with a solution of the sulphate or acetate of iron. When dry, they are washed with clean water, and the process repeated if required. They are lastly polished or varnished.

ECARTE.—A game played by two persons with thirty-two cards; the deuce, three, four, five, and six of each suit being discarded. Five points scored are game. Whoever wins three tricks, scores one point; whoever wins all the tricks, scores two. The following are the rules of the game:—1. The deal is decided by cutting—highest deals. 2. The cards are dealt by two and three, or by three and two. Five are given to each player, and the eleventh is turned up, which indicates the suit of trumps. 3. A trump is superior to every other card of a different suit. 4. The king counts as one point in favour of the person on either turning it up or holding it. 5. The holder of the king should distinctly announce that "he has the king." If the holder is also the player, he ought to make this announcement before he leads his first card, except when he plays king first, and in that case it is allowable to announce it after it is on the table, but before it is covered by the adversary's hand. 6. When a player is not satisfied with the hand dealt him, he proposes to take other cards, saying, "I propose;" the dealer accepts or refuses, according to whether he is satisfied or not with what he holds; if he accept, he gives as many cards as his adversary requires, and then serves himself with as many as he may want. 7. Whoever plays without changing cards, or whoever refuses to change cards, loses two points if he make not three tricks, and making them scores but one. 8. When a proposition is once made or refused, there

can be no retracting; also, when once a certain number of cards are asked for, that number can neither be diminished nor increased. 9. If after the second time of giving cards, the player still wishes to propose, he has the power of so doing; likewise after the third, and so on until the pack is exhausted; but the dealer, in refusing, no longer loses two points if he does not make three tricks. 10. It is obligatory to play the suit announced; thus, any one calling "club," and playing spade or any other suit, is obliged, if the adversary desire, to retake his card and to play the suit announced; if he has none the adversary can call a suit. If, however, the adversary deem the card played more favourable to him than the suit announced, he has the right to hinder its being taken back. 11. Whichever, from mistake, or otherwise, announces the king and has it not, loses one point independently of the result of the deal. 12. When a player deals out of his turn, and the error is perceived before the trump is turned up, there is a fresh deal by the proper dealer; if the trump is turned up, the deal is put aside for the present, but holds good for the next time; if the error is not perceived until after the hand is played, the deal holds good, since the fault lies between the two players, the one in having dealt, the other in having allowed the deal. The method of playing is as follows:—When a player holds (comprising the king of trumps) three cards which ensure the point, he ought always to "propose" if the two remaining cards are not sufficiently strong to give reasonable expectation of the vole (winning all the tricks). It is even good play to propose, were it only for one card, in order to hazard receiving a refusal, or to make the vole if the proposal is accepted; and there should be five cards in the *rentrée* (or take in). When a player has hopes of making the vole, and the adversary cannot answer a lead of trumps, it is better to play a king if single, than to continue trumps. When a player expects to make the vole, and has not trumps sufficiently strong to begin by playing them, he must be careful to keep changing his suit, to prevent his card being taken by a higher one of the same suit, and also to be able to make a trump, whatever it may be, at the fourth card, after having secured the point. When a player has made two tricks, and remains with the queen of trumps and two small ones, knowing the king to be in the adversary's hand, he ought to lead with one of the small trumps, and wait with the queen guarded. When there is a fear lest the adversary should make the vole, and the player has but one trump and four weak cards, without any hope of making the point, he must play his strongest single card, in order to get a chance of employing his trump in case the suit of his single card should be led up to him. When the game is three against four, and the player who is at four makes his adversary play, or plays himself without changing, the one who is at three, if he have the king, would do well not to announce it, in order to draw his antagonist into the error of leading trumps to pass his

good cards, and he taken by the king, which he did not expect; thus losing the point which he would perhaps have won had he known that the king was in the adversary's hand.

ECONOMY.—Economy should be the first point in all families, whatever be their circumstances. A prudent housekeeper will regulate the ordinary expenses of a family according to the annual sum allowed for housekeeping. By this means the provision will be uniformly good, and it will not be requisite to practise meanness on many occasions for the sake of meeting the extra expense attending one. The best check upon outrunning an income, is to pay bills weekly; for you may then retrench in time. This practice is likewise a salutary check upon the accounts themselves. A bill of parcels and receipt should be demanded, however small the amount, even if it be paid at the time of purchase; and, to avoid mistakes, let the goods be compared with these when brought home; or, if paid for at a future period, a bill should be sent with the articles, and regularly filed on separate files for each tradesman. An inventory of furniture, linen, china, &c., should be kept, and the items examined by it twice a year, or oftener, if there be a change of servants. In articles not in common use, tickets should be sewn on each, numbering them, and specifying to what they belong. The following minor hints are also worth observing: Preserve the backs of old letters to write upon. If you have children who are learning to write, buy coarse white paper by the quantity, and keep it locked up ready to be made into writing books; it does not cost half so much as it does to buy them at the stationer's. Do not buy ready-made articles if they can be made at home; by the latter method they will be found much cheaper and better. Linen rags should be carefully saved, for they are extremely useful in sickness. If they have become dirty and worn by cleaning silver, &c., wash them, and scrape them into lint. Do not cook a fresh joint whilst any of the last remains uneaten; with a little judgment, many excellent dishes may be contrived. Have all pieces of stale bread eaten up before a new loaf is cut, and put all the pieces left at meals into a pan, to be converted into puddings and cakes. Finally, throw nothing away that can be of the slightest service to your own family, or of benefit to a poorer one.

EDGING.—In horticulture, the materials employed for protecting and ornamenting flower-beds, &c. They are of various sorts,



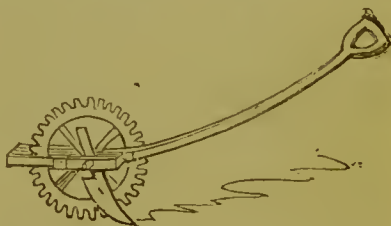
and are formed of wire, basket-willows, laths, boards, and iron. They may also be of various forms, as seen in the engravings. The basket-edging is a rim or fret of iron

wire, sometimes of laths, formed, when small, in entire pieces; and when large, in segments. Its use is to enclose dug spots or



lawns, so that when the flowers and shrubs cover the surface, they appear to grow from, or yield some allusion to a basket.

EDGING IRONS.—Implements for trimming borders, turf, &c. They are of various constructions. The form seen in the engraving is one of the best for this purpose; in using it, no garden-line is necessary, if the line to be edged is long and straight; but



when a line is used, it should be placed between the wheel and the cutting part of the machine. A certain degree of pressure on the handle is necessary when the ground is hard. When in use, the cutters should be sharpened every morning, and several should be taken out by the operator, in order that the instant one loses its cutting edge, its place may be supplied by another.

EDUCATION.—The education of children is a duty about which every parent should be, and generally is extremely solicitous. Where there is a large family, however, and the income happens to be limited, the great consideration is, how to provide a good education for the children upon reasonable terms. But, in endeavouring to attain this end, every consideration should not be sacrificed to cheapness; for it is well known that there are establishments where children are professedly fed, lodged, and educated, upon terms which cannot be remunerative, if justice be done; and, as a consequence, the children thus secured have an insufficient supply of food, are miserably accommodated, and are suffered to run wild, without any regard being paid either to their morals or their education. On the other hand, there are establishments where, if all these requirements are attended to, they are charged for at an unreasonable and exorbitant rate; such as persons in the most

affluent circumstances only can afford to pay for. What, therefore, is required is a medium between these extremes, where children may derive the advantage of a sound education and the comforts of a home upon moderate terms. Many such establishments exist in every town in England, and they may be found by a little inquiry, or by consulting the advertising columns of the newspapers. The terms charged at such establishments are from twenty pounds a year, upwards, additional expenses being of course incurred for instruction in any special accomplishment, which it is desirable the pupil should learn; French, Italian, German, music, singing, dancing, &c., usually come under this exceptional head. Before incurring the expense for these items, however, it should be considered whether these accomplishments are likely to be of future service, and compatible with the pupil's after life; and, in all cases, it is better that a few accomplishments should be learned perfectly, rather than gaining a superficial acquaintance with many.

Some parents are in favour of having their children educated abroad, others are opposed to this system, and will insist on keeping their children at an English school. The best method of all is, to let children have the earlier portion of their education in England, and finish it at some foreign seminary; by thus placing the children of one nation with another, the mind becomes expanded, and enlarged views take the place of narrow prejudices. Again, by thus sending children abroad for their education, the language of the country, especially its idioms and pronunciation, are attained with a greater degree of facility and precision than they could be in the mother country, under the ablest of instructors. The terms for education in France and Germany are upon a somewhat lower scale than those of England, especially in the provincial towns. Before, however, children are intrusted to the care of a foreigner, the strictest inquiries should be made respecting the establishment and the proprietor, owing to the remoteness of the school; as in most instances the care of the child will be totally transferred from the parent to the temporary guardian. Respecting the separate merits of children being educated at home and at school, there cannot be a question. At home a child is humoured and indulged, and many wholesome rules and regulations are relaxed, without which a school could not exist. But at school, certain duties have to be performed, and the scholar well knows that if he neglects them he will meet with merited punishment. Home education has also a bad moral influence; for children, being too tenderly cared for, are unfitted to meet those trials experienced from home good humouredly, and their tempers thus become soured, and their spirits crushed. A school, however, is a miniature world, where every member is urged onward by a spirit of emulation, is impressed with the necessity of subordination, taught to despise small troubles, and learns how to defend his right. By a parity of reasoning, establish-

ments termed day-schools are not so salutary for the pupil as boarding-schools; for here again the indulgence of the parent neutralizes the authority of the instructor, and in nearly all cases the child is encouraged to bring home idle tales of every petty grievance, and to be sympathised with accordingly, which a distance from home would, as a matter of course, effectually prevent. Finally, when once a child is placed under the care of an instructor, no parent should interfere with the system of education or mode of training pursued, by introducing theories of his own. Nor should he display the bad taste to side with the pupil against the master, when the former has been disobedient and refractory.

EEL.—A salubrious fish much prized for the table. It is, however, not much sought after for sport by the angler, and is by many accomplished anglers considered scarcely deserving of notice. The eel is found in rivers, reservoirs, ponds, canals, &c., being very fond of still water with a muddy bottom. Those that have chosen for their habitation rivers having uninterrupted communication with the sea — unlike the salmon — are supposed to migrate to the sea, deposit their spawn, and the young to enter the rivers, and pursue their upward way in large swarms, until they find fresh water wherein to take up their future habitation. Ancient authors differed as to the means of propagation of the eel, and supported a theory which may be called a re-creation of mud by the sun's heat when it shines upon the overflowing of the Nile, or from the putrefaction of the earth, or of a particular dew falling in May or June; and even in the present day there is a difference of opinion as to whether the eel is oviparous or viviparous.

The eel may be taken by the angler at the bottom with worms, loach, gudgeon, bleak, minnows, a small lamprey, the entrails of fish, flesh, or fowl, or, indeed, with almost anything; but it is generally caught by night-lines, to which several hooks are attached, and which are cast into the water by a brick, stone, or other weight being attached thereto, and the other end pegged into the bank, or tied to a branch of a tree, or to a bunch of weeds on the water-side. Sniggling is a plan successfully adopted for catching eels in the day-time, when they creep into holes in the bank or woodwork, or under stones or logs of wood. It is practised by baiting a small hook or stout needle bound to the line for half of its length only with a worm, and presenting it at the entrance of the hole, or at the edge of the stoue or log by the aid of a bent rod; the eel takes the bait, and the angler holds the line taut until his prey, gradually relaxing its adhesion to its shelter, is drawn out. Bobbing also is practised by first stringing a quantity of large lob worms upon worsted, attaching them to a bell-shaped piece of lead, sufficiently large to readily sink them; the lead and worms are secured to a pole of sufficient length, say twelve or fourteen feet long, by a piece of stout whipcord. The eel may be felt to bite, when it is to be

gently but quickly lifted, either out of the water, or be suffered to drop into a basket floating ready for its reception; their teeth become entangled in the worsted, from which they cannot disengage themselves, if the angler is an adept at the process. Eels are caught in rivers in baskets or pots, to which access is easy, but retreat difficult, wherein have been placed some small fish or some flowers of the elder tree, and in bucks, which are large baskets made on the same principle, fitted to a framework, and at suitable periods and convenient states of the water, lowered therein, when the eels run into them on their downward passage to the sea, or when seeking a new locality. Eels are also taken by spearing them whilst they are lying singly on the bottom, or in clusters imbedded in the mud. The instrument used, called an eel-spear, is of six or eight prongs of flattened iron, the edges of each prong being notched, and fastened to a long pole. It is then violently plunged into the mud and quickly withdrawn; the eels are retained between the prongs by their serrated edges.

EEL FORCEMEAT.—Take two fine eels, boil them till they are nearly done, then put them into cold water: broil a perch; when it is nearly done, lay it to cool; take the meat from the bones of both of the fish, mince it, and add the liver of a cod minced also; season with pepper and salt, add sweet herbs, some small onions minced, some scraped bacon, a little veal suet, a few bread crumbs, and a piece of butter; put the whole into a mortar, and beat it to a paste. It is used for fish pies, and adds a fine relish to all made dishes of fish. It also may be rolled up into balls, and fried or stewed.

EEL PIE.—Skin and prepare the eels, roll them in spices and sweet herbs, boil the skins, heads, and bones, and make as much stock as will be required; cut the eels into pieces, lay them in a dish, and cover with a paste; bake in a moderate oven.

EEL SOUP.—Take two pounds of cleaned and cut eels, two quarts of water, a crust of bread, two blades of mace, two onions, a few corns of white pepper, and a bundle of sweet herbs: boil the fish uncovered till half the liquor is wasted, then strain it, and serve it up with toasted bread.

EELS BAKED.—Skin and clean the eels, cut them in lengths according to the capacity of a shallow pan; stand them upright in the pan, and fill it with them; put in a little water, some salt, pepper, shalots cut small, sweet herbs, and a little minced parsley; set them in an oven to bake. When they are done, pour the liquor that comes from them into a saucepan, and flavour and thicken it with a piece of butter rolled in flour, and a little white wine.

EELS BOILED.—For this the smaller ones should be chosen. When they are well cleaned and skinned, cut off the heads, and put them into boiling salt and water, adding a little vinegar; parsley and butter are generally served with them.

EELS COLLARED.—Clean and skin the eels, take out the bones, and cut off the

heads and tails; lay them flat, and strew over them a liberal supply of the following seasoning: grated nutmeg, grated lemon-peel, some salt, pepper, minced parsley, sweet marjoram, a little thyme, savoury, and a leaf or two of sage; roll them very tight, and bind them firmly with tape. Boil the heads, tails, and bones in two quarts of water and a pint of vinegar, with an onion, three bay leaves, some salt and pepper; when it boils, put in the eels; and when tender, take them out, and boil the liquor a little longer; strain and skim it, and when cold, put in the fish. If the eels are to be kept long, it will be necessary to boil up the liquor occasionally, and to add a little fresh vinegar.

EELS FRIED.—Clean and skin the eels, cut off their heads, and divide them into pieces three or four inches long, and then score across in two or three places; season them with pepper and salt, and dust them in flour, or dip them into an egg beaten up, and sprinkle them with finely grated bread crumbs. Fry them in fresh lard or dripping; let them drain and dry on the back of a sieve before the fire; serve with melted butter and parsley.

EELS PICKLED.—Skin some eels, slit them up the middle, take out the bones, and rub the flesh over with salt; let them lie three days and turn them every day; then take them out of the brine, wash them in water, and wipe them dry with a cloth; season them with nutmeg, cloves, mace, and a bay leaf; roll them up, and tie them tightly in a cloth; boil them in an equal quantity of white wine and vinegar; when they are tender, take them out of the liquor and set them to cool; when quite cold, put them into the same liquor again; and if there is not sufficient liquor, boil some more vinegar, white wine, and spices. Put by in jars.

EELS POTTED.—Clean, skin, and bone them; season them well on both sides with pepper, salt, and mace; let them lie for six hours, then cut them into small pieces and pack them closely into a dish; cover them with a coarse paste and bake them. When quite cold, remove the paste, and pour over them clarified butter.

EELS, PROPERTIES OF.—The qualities of eels as an article of diet differ materially with their size; the smaller sorts are nutritious and comparatively easy of digestion, but the larger kinds, from the quantity of oil they contain, are apt to disagree with delicate stomachs. For this reason, they should not be partaken of until the greater portion of the oil has been previously extracted; this is done by boiling them very gently for some time until the oil rises, when the eels are to be taken out, and set aside for use.

EELS ROASTED.—After skinning an eel broil it on a clear fire, wipe and scrape it; clean it, and turn it in the form of a ring; put skewers into it of wood or silver; then put the eels into a stewpan, with a little butter, slices of carrot, spices, parsley, chives, and onions; add some stock and half-a-pint of wine, and boil. When the eel is half done, fix it on a spit; wrap it up in buttered paper

and roast it by a clear fire till done; take off the paper just before serving, in order to brown the fish. Serve with melted butter and anchovy sauce.

EELS SPITCHCOCKED.—Clean them well and rub them with salt; slit them up the middle and remove the bone. Wash and dry them, cut them into pieces three or four inches long, dredge them with flour and afterwards wipe it off, to render them quite dry. Dip them in a thick batter made of melted butter, yolk of eggs, with a little minced parsley, sage, a very small shalot, and a seasoning of pepper, salt, and cayenne. Roll the pieces in finely grated bread-crumbs or biscuit powder. Dip and roll them again, and broil them over a clear fire till they attain a light brown colour. Serve with melted butter flavoured with anchovy sauce, and slightly acidulated with lemon juice, or any favourite flavoured vinegar.


EELS STEWED.—Clean and skin the eels, and cut them into pieces about four inches long. Season well two pounds and a half with salt and black pepper; put an ounce of butter into a stewpan with a large handful of sorrel, three or four sage leaves, a small onion minced, a little grated lemon-peel, and an anchovy chopped small. Put in the eels, and pour over them half-a-pint of water, stew them gently for half an hour, shaking them occasionally; before serving them, add a little grated nutmeg, and the juice of half a lemon.

EELS, TO CARVE.—If eels should be brought to table whole, they should be divided into pieces three or four inches long; the thickest portion is considered the best. A little of the sauce should be served with them.


EELS, TO KILL AND SKIN.—The heads of the eels must be struck upon a block or hard substance, and this, by stunning them, causes them to suffer least. To skin them, take the head in your hand with a cloth and just cut through the skin round the neck, which turn down about an inch; then pull the head with one hand and the skin with the other, and it will come off with facility; to dress them, the belly must be opened, the interior taken out without breaking the gall, and the bristles which run up the back cut off.

EGG BALLS.—Pound a sufficient quantity of the yolks of hard-boiled eggs in a mortar, with as much raw yolk and flour as will bind the composition. Add salt, and make up in the form of balls the size of a marble. Put at least two dozen to a tureen of soup.

EGG CURRY.—Slice two onions and fry them in butter, add a tablespoonful of curry-powder; let them stew in a pint of good broth till quite tender; mix half a pint of cream and thicken with arrowroot or rice-flour. Simmer a few minutes, then add six hard-boiled eggs, cut into slices; beat them thoroughly, but do not let them boil.

 Onions, 2; butter, sufficient; curry-powder, one tablespoonful; broth, 1 pint; cream, $\frac{1}{2}$ pint; arrowroot or rice flour, to thicken; eggs, 6.


EGG FLIP.—Heat a quart of mild ale, and pour it into a jug with a spout; in a similar jug beat up three eggs with a quarter of a pound of moist sugar, add a quartern of brandy or gin, and flavour with nutmeg. When the ale is quite hot but not boiling, pour it quickly into the jug that contains the eggs, return it back into the other jug, and thus keep pouring the mixture from one jug to the other, till the whole is thoroughly incorporated and perfectly smooth.

 Ale, 1 quart; eggs, 3; sugar, $\frac{1}{4}$ lb.; brandy or gin, 1 quartern; nutmeg, to flavour.


EGG FORCED.—Boil six eggs hard, remove the shells, but leave the eggs whole; cover them with a forcemeat made with scraped ham, pounded anchovy, pounded veal and bacon fat, well mixed together and highly seasoned; brush them with the yolk of egg, and dredge them with bread-crumbs or vermicelli; fry them a pale gold colour, or put them in an oven for a quarter of an hour, and serve them up with gravy in the dish.

EGG HOT.—This is made in the same manner as the preceding, but without spirits or spice; eggs, ale, and sugar being the only ingredients.

EGG MARMALADE.—Blanch and pound with a little rose water two ounces of sweet almonds, two ounces of orange marmalade, and four ounces of citron; add two tablespoonfuls of brandy, the beaten yolks of six and the whites of two eggs, with an ounce of pounded loaf sugar; put it into a saucepan, and stir it till it becomes thick, then pour it into a shape. When quite cold, serve it, turned out and garnished with flowers.

 Almonds, 2ozs.; rose-water, sufficient; marmalade, 2 ozs.; citron, 4 ozs.; brandy, 2 tablespoonfuls; eggs, 6 yolks, 2 whites; sugar, 1 oz.


EGG PIE.—Mince the yolks of twenty-four eggs, two pounds of suet, half a pound of bread-crumbs, an ounce of candied peel, two ounces of sugar, one tablespoonful of orange-flower water, half an ounce of allspice, a pound of minced raisins, half a pound of currants, and two dozen sweet almonds; cover, bake, and serve with wine sauce.

 Eggs, 24 yolks, suet, 2 lbs.; bread-crumbs, $\frac{1}{2}$ lb.; candied peel, 1 oz.; sugar, 2 ozs.; orange-flower water, 1 tablespoonful; allspice, $\frac{1}{2}$ oz.; raisins, 1 lb.; currants, $\frac{1}{2}$ lb.; almonds, 24.

EGG-PLANT.—A tender greenhouse plant, native of Africa. It flourishes best in a light rich soil, and blows violet-coloured flowers in June and July, which are succeeded by fruit, shaped and coloured like an egg. It is propagated by seed.

EGG-PLANT, TO DRESS.—Take as many egg-plants as the extent of the family requires; pare, quarter, and boil them till soft enough to mash like turnips. In mashing them, add a little bread-crumbs soaked in milk, butter, chopped parsley, an onion boiled, pepper, and salt. Mix these well together, pour the mixture into a baking dish, cover the top with grated bread, and bake for half an hour.


EGG-PUDDING.—Beat nine eggs with nine tablespoonfuls of flour, add a quart of milk and a saltspoonful of salt; tie the mixture in a cloth which has been scalded and dredged with flour; put into boiling water, and boil for an hour and a half. Serve with sweet sauce.

 Eggs, 9; flour, 9 tablespoonfuls; milk, 1 quart; salt, 1 tablespoonful.

EGG SALAD.—Boil six cloves of garlic for six minutes, and pound them with a few capers and two anchovies; mix them thoroughly with oil, salt, pepper, and vinegar, and serve with hard-boiled eggs, whole or cut in two.

EGG-SAUCE.—Boil a couple of eggs hard, and when quite cold mince the yolks and whites separately; mix them well, put them into a hot tureen, and pour to them a quarter of a pint of boiling melted butter; stir, and serve immediately.

EGG WINE.—For each half-pint of wine intended to be made, take two eggs, beat them up thoroughly in a small basin with an ounce and a half of fine moist sugar, and a flavouring of nutmeg and cloves. In the meantime, heat half-a-pint of sherry and water, in equal quantities, or stronger, of the sherry if desired, and when boiling, stir it into the eggs, after which pour the whole backwards and forwards until it thickens. If it will not thicken readily, it must be put over the fire again, and stirred for a few minutes.

 Wine and water, $\frac{1}{2}$ pint, mixed; eggs, 2; sugar, 1½ ozs.; nutmegs and cloves, to flavour.

EGGS BOILED.—The boiling of eggs demands a certain degree of care. If they are brought from a cold place, and suddenly plunged into boiling water, they will frequently break, and a large portion will often escape from the shell. When this accident does occur, a little salt put into the water will prevent the further escape of the egg from the fracture. In winter, eggs should be held for an instant over the steam from the saucepan before they are laid in. When they are introduced into the saucepan they should not be dropped in from the hand, but gently deposited by the aid of a spoon. The time required for boiling eggs is regulated by the degree of firmness required. Three minutes will boil them sufficiently for persons who like the whites in a partially liquid state; four minutes will harden the whites only, and leave the yolks still liquid, and five minutes and upwards will render both the yolk and white hard. Eggs are frequently underdressed or overdressed through forgetfulness or miscalculation. A certain way to avoid this is to put the eggs into cold water, and by the time the water boils, the eggs will be cooked to a medium degree. They may continue boiling beyond this point to any stage of hardness desired.

EGGS BROILED.—Lightly butter a small oval dish, upon which break two, three, or more eggs without disturbing the yolks, season lightly with a little white pepper and salt. Put a few small pieces of butter here and there upon them, and then place the dish

in a small oven, where let it remain until the whites become set, but by no means hard, and serve hot; if the oven is moderately hot the eggs will take about ten minutes. They may also be cooked on a dish before the fire; turn it round now and then until the eggs are regularly set.

EGGS BUTTERED.—Beat up six eggs thoroughly in a basin; set two ounces of fresh butter to melt in another basin placed in boiling water. Stir the eggs and butter together; add pepper and salt, and a finely minced onion, if liked. Pour the mixture into a small saucepan, and toss it over a slow fire for a few seconds, then pour it into a large basin; and continue pouring it backwards and forwards several times, setting it on the fire occasionally, and keeping it briskly agitated till it thickens. Serve on toast or as an accompaniment to salt fish, or herrings.

EGGS COOKED WITHOUT BOILING.—Put some boiling water into a large basin, and let it remain for a few seconds; then turn it out, lay in the eggs, and roll them over, to take the chill off the shell, and to prevent their cracking. Pour upon the eggs boiling water from the kettle, until they are completely immersed; cover the basin with a plate instantly, and let it remain upon the table for twelve minutes; the eggs will then be found to be perfectly cooked, free from all flavour and appearance of rawness, and yet so lightly and delicately dressed, that persons will be tempted by them who cannot eat eggs boiled in the usual way.

EGGS FRICASSEED.—Boil eggs hard, take out a portion of the yolks whole, cut the remainder into quarters with the whites. Make some good gravy boiling hot, put in minced thyme and parsley, and add it to the eggs with a little grated nutmeg; shake the whole up with a piece of butter until it is of the proper consistence. Garnish with eggs boiled hard and chopped up fine.

EGGS FRIED.—Have ready a frying-pan containing hot fat, drop the eggs in separately, let them fry for one minute, then drop some more hot fat over them; three minutes will cook them. They do not require to be turned.

EGGS POACHED.—Have water gently simmering in a stewpan, place in carefully each egg, previously broken, with a cup, without disturbing the yolk; when the white is coagulated, which it will be in fourteen minutes, the eggs will be done. They may be served in various ways; on bread slightly toasted, or with spinach. In these cases, the bread should be cut into squares, and an egg placed on each square. The spinach, after being boiled, must be pressed, and cut into triangular pieces; upon one of each of which an egg must be placed. Serve with melted butter.

EGGS POTTED.—Boil the eggs hard, shell them, and separate the whites from the yolks; pound the latter in a mortar with a seasoning of salt, pepper, and powdered spice. Rub in, also, by degrees, a quantity of clarified butter cold, chop up the whites into small pieces. As the yolk paste is put

into pots, strew in the bits of white with it, and press the whole down well. Cover with clarified butter.

EGGS, PROPERTIES OF.—Eggs are composed almost entirely of albumen; the yolk, besides this substance, contains gelatin, oil, and water, in combination with yellow colouring matter. There is also a small proportion of sulphur mixed with the albumen; it is to this circumstance that silver spoons used in eating eggs, are stained of a dark colour; and the strong smell of sulphuretted hydrogen, which eggs emit when in a state of putrefaction, is also derived from the same principle. As an article of diet, eggs, when raw, have a gently laxative effect; when taken in this state, they are deemed serviceable in jaundice and obstructions of the liver; when boiled in the usual manner, they afford a mild strengthening aliment, not difficult of digestion. Hard boiled eggs remain long on the stomach, and are apt to constipate the bowels; they are rendered easier of digestion when used with vinegar as a condiment. The eggs of granivorous fowls are considered the best; those of the common hen and the Guinea hen are the most esteemed. The eggs of ducks, geese, and all the water fowls, contain a greater proportion of oil, and are more strongly flavoured; they are only suited for powerful stomachs. An egg boiled until the greater part of the white is slightly coagulated, without depriving the yolk of its fluidity, and taken with a due proportion of bread, is an excellent article of diet for a child, or a person in a state of convalescence; but when the stomach is deranged, eggs, in whatever state, are apt to increase the disorder. A fresh egg contains about the same amount of nourishment as an ounce and a half of meat, and an ounce of wheaten bread. For the official qualities of white of eggs, see ALBUMEN.

EGGS, TO CHOOSE.—In choosing eggs, hold them to the light: if they are clear, they are fresh; if they are thick and clouded, they are stale; if they have a black spot on the shell, they are worthless. The most reliable mode of testing them is by the light of a candle. The freshness of eggs may also be proved by putting them in a pan of cold water. Those that sink the soonest are the freshest, and those that remain on the surface, not fit for food. Eggs purchased in the ordinary way are always to be suspected; therefore let an earthen pan be kept with charcoal and lime-water to put them in. The longer the eggs are kept in this liquid the better they will be; the charcoal and lime having the tendency to destroy and arrest decay.

EGGS, TO PRESERVE.—Eggs should be new, or not more than twenty-four hours old, when they are stored, otherwise their flavour cannot be relied upon. Eggs may be preserved a short time by putting them in a jar of salt or lime-water, with the small end downwards. They may be preserved for several months by greasing them all over with melted mutton suet, and wedging them close together, the small ends downwards, in a box of bran. To keep them for

winter use, pour a gallon of boiling water on two quarts of quicklime, and half a pound of salt; when cold, mix with it an ounce of cream of tartar. The day following put in the eggs. After the lime has been stirred well into the boiling water, a large portion of it will settle at the bottom of the vessel in which the eggs will remain. Keep them covered with the liquor, and they may be preserved for two years.

ELDER.—Of this tree there are many varieties, but those cultivated for their fruit are chiefly the white and black. The scarlet and green berries may also be used like the black, and are very ornamental trees in the shrubbery. As the tree will grow anywhere, either in open or shady situations, it may be planted in any out-ground or waste spot, as single standards or in rows, to assist in forming boundary fences. Trees planted in the hedge order, if suffered to grow up untrimmed, will produce abundance of berries for use. The elder is raised by the cuttings of the last year's shoots planted in the winter or very early in the spring, and by seed in the autumn. Select for cuttings some strong young shoots of the preceding summer, cut into lengths of one foot to three feet or more; these may be planted either where it is intended the plants should remain, or in a nursery for a year's growth. Insert them from six inches to fifteen inches into the ground, according to their length; they will soon strike root; and will shoot strongly at top the same year. Train those designed for standards with a single stem, from three feet to five feet high; and those for hedges, with branches out from the bottom. To raise this tree from seed, sow in autumn, October, or November, or later in mild weather, or soon in the spring, either for a hedge in drills, where the plants are to remain, or in a bed or border for planting out when of one or two years' growth. The berries ripen in perfection, for the purpose of making wine, about the middle and end of September, and in October, and should then be gathered in bunches. The elder, by the smell that it emits, acts as some sort of protection to esculents, grain, and fruit trees, against the ravages of flies and insects.

ELDERBERRY WINE.—To six gallons of berries add seven of water, and a quarter of a pound of allspice, two ounces of ginger, with a few cloves. Boil this for half an hour, by which time it will probably be wasted to seven or eight gallons. Squeeze the berries well through a sieve, adding to every gallon three pounds and a half of moist sugar; the quantity there will be sufficient for a nine gallon cask. The sugar being added, boil till the liquor becomes clear, taking the scum off as it rises. Remove it to a cool place, and put it into the cask; when lukewarm, add to it a piece of toasted bread dipped in thick yeast. Should fermentation not have taken place on the next day, a small quantity of wine being taken out and made to boil, and then replaced in the cask, will most probably excite it; if not, another piece of bread dipped in yeast, as before, must be added; let it remain about a week.

When the fermentation has subsided fill up the cask, and bung it down closely. It will be fit to drink in about three months, but will keep for years.

ELDER FLOWER OINTMENT.—One of the mildest and most cooling of all unguents, and very suitable for anointing the face, neck, &c., when sun-burnt. It is made of fresh elder flowers stripped from the stalks, two pounds of which are simmered in an equal quantity of hog's lard till they become crisp, after which the ointment, in its fluid state, is strained through a coarse sieve.

ELDER FLOWER VINEGAR.—To half a peck of elder flowers put one gallon of vinegar, and leave it for a fortnight in a stone bottle to ferment; then strain it through a flannel bag, put into it a small portion of dissolved isinglass, and bottle for use.

ELDER FLOWER WATER.—To two drachms and a half of elder flowers add one quart of boiling water, infuse for an hour, and strain. This is used as a wash or lotion for the face, in cases of sunburn.

ELDER FLOWER WINE.—To every gallon of water put four pounds of sugar, half a pint of elder, and a tablespoonful of yeast. Mix these altogether, and put them in a barrel, stir it up every morning for a week, then stop it up close; it will be ready to bottle in six weeks.

ELECTRICITY.—A phenomenon in science, by which various bodies become influenced through the medium of attraction and repulsion. If a stick of sealing-wax, a bit of amber, the glass of a watch, or any other smooth piece of glass, be rubbed upon dry flannel or woollen cloth, or even the sleeve of a cloth coat, it will be found to have acquired a new and very singular physical property. This property is exhibited by holding the body which has been subjected to friction over small and light substances, such as shreds of paper, gold leaf, feathers, straw, cork, &c. These will be instantly attracted to it, some of them adhering to its surface, others falling back to the place whence they were withdrawn; whilst others are thrown off from the body, as if they were repelled from it.—See *Dictionary of Useful Knowledge*, article **ELECTRICITY**.

ELECTRIC TELEGRAPH.—A well-known invention by which communications are conveyed to a distance, and answers are received, in the space of a few minutes. The scale of charges for conveying messages by electric telegraph is regulated by the number of words, and by the distance. In sending a message, the meaning should be expressed as clearly and concisely as possible, not only on the score of economy, but also to prevent misapprehension. An illustration of the inconvenience occasioned by using ambiguous phrases in electric telegraph messages, is furnished by the following incident:—A London physician was engaged by a lady residing in the country to attend upon her in her approaching accouchement. It happened soon afterwards that the child was prematurely born, and the friends of the lady telegraphed the London physician,

"Don't come—too late;" meaning that, as the anticipated event had taken place, there would be no need of his services. The physician, upon receiving the message, however, read it "Don't come too late;" understanding the meaning to be that the accouchement was momentarily expected, and that he was not to delay his departure. He accordingly took the train and hastened to his patient, and was, of course, soon made aware of the blunder and the fruitlessness of his errand. In matters of vital import, it would always be as well to request an answer, so that the sender of a message may be assured that it has been received and understood.

ELECTRO PLATE.—See **GILDING**, **SILVERING**, &c.

ELECTUARY.—A medicinal compound formed of light powders, generally vegetable, mixed up with honey, syrup, or sugar, to the consistence of a stiff paste. The preparation of electuaries is similar to that of confections and conserves, and the same precautions must be observed to reduce the dry ingredients to very fine powder before adding them to the syrup or other substances used to give them form. Care must also be taken to diffuse the ingredients equally through every portion of the mass, by patient and laborious stirring. The neglect of this has often led to disagreeable consequences, from some portion of the electuary being nearly inert, while another portion has possessed increased activity.—See **LENITIVE ELECTUARY**, **PECTORAL**, **STIMULANT**, **STOMACHIC**.

ELIXIR.—A name formerly applied to various compound tinctures, and to preparations supposed to contain the quintessence of other substances.—See **DAFFEY'S ELIXIR**, **GARLIC**, **IPECACUANHA**, **ORANGE-Peel**, **PAREGORIC**, **ROSES**, **VITRIOL**.

ELM.—A genus of the forest trees, common in Great Britain. There are several varieties of this tree. *The English or narrow-leaved elm*, fig. 1; *the Scotch, or broad-leaved*



elm, fig. 2; *the common cork-barked elm*; *the Dutch cork-barked elm*; and *the smooth-leaved, or Wych elm*. The elm is valued for the rapidity of its growth, its hardiness, and its capability of thriving in poor soil unfit for tillage. It is propagated by suckers, which rise abundantly from the old roots. It is also pro-

pagated by layers, and often by grafting on the common Wych elm, especially when wanted for dressed ground, or for avenues, where it is desired that no suckers should be seen. Elm timber is difficult to work, but not liable to split, and bears the driving of bolts and nails better than any other timber. It is used in all works where it is liable to be continually dry or wet, as for water-pipes, pumps, water-wheels, &c. It is also very generally employed for weather boarding, and for common cabinet-work. The leaves of the elm are eagerly eaten by cattle, sheep, and hogs, and the inner bark is a valuable medicinal agent. The decoction of it forms an excellent vehicle for minute doses of corrosive sublimate in some obstinate skin diseases; and in combination with vinegar or muriatic acid, it is a useful gargle for inflamed throats.

ELOCUTION.—Books: *Vanderhoff's Art*, 5s.; *Sheridan Knowles's Elocutionist*, 3s. 6d.; *Chambers's Course*, 3s.; *Aitken's Class Book*, 3s. 6d.; *Thehall's Exercises*, 5s. 6d.; *Smart's Practice*, 5s.; *Caldwell's Manual*, 3s. 6d.; *Ewing's Principles*, 3s. 6d.; *Roberts's Students' Assistant*, 3s. 6d.; *Comstock's System*, 8s.; *Gawthorpe's Reader*, 2s.; *Bell's Manual*, 3s. 6d.; *Stimington's Elocutionist*, 3s.; *Pinch's Practical Elocutionist*, 4s.; *Rowton's Debater*, 6s.; *Enfield's Exercises*, 4s.; *Neil's Elocution and Composition*, 1s.; *Smith's Elocution without a Master*, 1s. 6d.; *Neil's How to Speak*, 1s.

EMBARRASSMENT, PECUNIARY.—When a person finds himself in such pecuniary difficulties as to be unable to meet the demands made upon him, the wisest course he can adopt is to meet the adverse circumstance boldly, and not to endeavour to conceal either from himself or others, a position which must be divulged sooner or later, and which only becomes the more aggravated the longer it is hidden. To accomplish this end effectually, an embarrassed debtor should make out a clear and honest statement of his assets and liabilities, without exaggerating the one, or diminishing the other. This done, he should write down a detailed list of his creditors, and place against each the amounts of the present proposed instalment, and of the future payments which his resources justify him to apportion to each creditor. Thus prepared, the debtor should wait upon each of his creditors in person, or depute some friend, or legal representative, to do so, briefly stating the circumstances of the case, and making a proposition for settlement agreeably to the statement drawn up. The chances are, that an offer thus made will be accepted, with little or no detriment to the character and position of the embarrassed debtor. The creditor, as a matter of feeling, will appreciate the man who thus ingeniously declares his inability to meet his engagements, and makes practical arrangements for their future liquidation; while, as a matter of policy, he will be impressed with the fact, that if he refuse to acquiesce, he will, in all probability, drive the debtor to the Insolvent Court, and so obtain far worse terms than those voluntarily made, or, it may be, none at all. But if, on the other hand, a

debtor, through false notions of pride, conceals the real state of his affairs, and temporarily patches them up, by purchasing present relief at an exorbitant rate, he is but postponing the revelation which eventually must be made; increasing, in the meantime, his liabilities, incensing his creditors against him, so that they become inexorable, and finally expiating his folly by ruin and degradation, accompanied, perhaps, by flight or imprisonment. These remarks apply more immediately to persons who have contracted personal debts only, or business ones on a limited scale. For the settlement of commercial liability in a more extended sense, see **ARRANGEMENT WITH CREDITORS**.

EMBROCATION.—A fluid medicine for external and local use; applied in the same manner as lotions and liniments.

EMBROIDERY.—Books: *Ladies' Book of Embroidery and Braiding*, in Nos. 1s. each; *Frame and Table-work Companion*, 3s.; *Embroidery Companion*, 5s.; *Young Ladies' Manual of Embroidery*, 2s. 6d.; *Embroidery and Sampler Book*, 6d.; *Trübner's Embroidery*, 1s.

EMERALD.—A gem ranking next to the diamond in value. A fine emerald weighing four or five grains, is worth as many pounds; one of ten grains, about £2 per grain; one of fifteen grains, £3 or £4 per grain; and so on in proportion to the increase in size.

EMETICS are certain drugs that, by producing a sudden revulsion in the system, and reversing the peristaltic or downward motion of the intestines, cause the stomach, by a series of irregular spasmodic contractions, to discharge its contents upwards. This is effected either by an agent that acts primarily and immediately on the nervous system, as by the exhibition of tobacco-smoke, or the injection into a vein of tartar emetic; or by the employment of such drugs as excite an undue action of a sub-inflammatory nature in the mucous membrane of the stomach, exciting an abundant secretion of gastric juice, and throwing the muscular coat of the organ into a state of irregular contraction. Emetics are employed in medicine, either as a simple evacuant to empty the stomach, when oppressed or overloaded by too much, or an indigestible character of food; or at the commencement of fevers, in the hope of breaking the chain of morbid actions, by emptying the stomach, accelerating for a space the action of the heart, promoting perspiration, by their efficacy in stimulating all the secreting functions; and finally, in robust subjects, in cases of dislocation, to relax the muscular tension and save time and suffering to the patient. Emetics are only a species of stimulant, and like that class of drugs, if often repeated, lose their effect; in this manner, tartar emetic, which is one of the most powerful emetics in the materia medica, after one or two exhibitions, becomes a promoter of digestion, and an excellent tonic in consumption. Emetics should always be given on a full stomach, or if not, they should be accompanied with copious draughts of warm water, to facilitate and render more easy the operation of vomiting. Eme-

tics are of two sorts, the mineral and the vegetable. The mineral are silver, zinc, copper, iron, mercury, and antimony; the vegetable, ipecacuanha, squills, tobacco, camomiles, mustard, asarabacca, and am-mouiacum; beside these, an emetic can always be extemporised, by giving a large tablespoonful of common salt, dissolved in warm water, or by swallowing it dry, and drinking the water after. In all cases of poisoning, from whatever means, the first duty is to empty the stomach of whatever unabsorbed poison may be remaining, and for this purpose, an emetic is an immediate necessity. In selecting the kind of emetic to be used in these cases, it must be borne in mind, that the chief danger accruing from most poisons, is their absorption into the blood; the quicker, therefore, the stomach can be emptied, the better chance the patient has of recovery; for this purpose, the most active emetics should be employed; but as some of them have the power of promoting absorption, discretion must be exercised in deciding on the agent to be used. On this account, as a general rule, mineral emetics should be given for vegetable poisons, and vegetable emetics for mineral poisons. In affections of the liver, where the biliary secretion is defective, emetics are productive of much benefit, by stimulating the secreting powers of the organ; and again, in cases of acute hæmorrhage, emetics in small nauseating doses, repeated at frequent intervals, are highly serviceable, by diminishing the force of the circulation. Though generally considered a safe remedy, and one attended with beneficial results, there are conditions of the system in which it would be improper or dangerous to employ them. 1. They should never, or only in exceptional cases, be given to persons of a plethoric state of body. 2. In all congestive states of the head, they are inadmissible. 3. In inflammation of the viscera or internal organs, or where inflammation is to be apprehended.

EMIGRANT PASSENGERS.—The law relating to emigrant passengers extends to every passenger ship on any voyage from Britain, Ireland, or the Channel Islands, to any place out of Europe not within the Mediterranean Sea, except ships of war, transports, or mail steamers. No ship to carry passengers on more than two decks, nor be allowed to clear out with a greater number of persons on board than in the proportion of one person to every two tons of registered tonnage. Two children under twelve years of age to be reckoned as one person, but children not above one year old not to be computed. For *light and air* the passengers are at all times (weather permitting) to have free access to and from between-decks by the hatchway appropriated for their use. Two boats to be provided for every ship of less than 200 tons; three boats if 200 tons and upwards; four boats if 400 tons. One boat to be a long-boat, and one a life-boat, with life-buoys, &c. Each ship to be manned with a proper complement of seamen. Gunpowder, vitriol, guano, green hides, or any other article likely to endanger life or health, prohibited as cargo, and no

part of the cargo to be on deck. *Dietary scale* for each passenger (exclusive of any providings by the passengers themselves), of water, at least three quarts daily; of provisions, after the rate per week of three and a half pounds of bread or biscuit, not inferior in quality to navy biscuit; one pound of wheaten flour; one and a half pound of oat-meal, two ounces of tea, one pound of sugar, and two ounces of salt. The water to be pure, and the provisions sweet and wholesome. Such issue of provisions to be made daily before two o'clock in the afternoon, as near as possible in the proportion of one-seventh part of the weekly allowance; first issue to be made on the day of embarkation to all passengers on board, and articles to be in a cooked state. Other articles of diet may be substituted by the master in a fixed proportion, provided the substituted articles be set forth in the contract-tickets of the passengers. In every ship with above 100 passengers, a passenger steward to be appointed to mess and serve out provisions, and to maintain order and cleanliness; also a cook and cooking apparatus. No passenger ship having fifty passengers on board, and the computed voyage exceeding eighty days by sailing vessels or forty-five days by steamers, or having 100 persons on board, whatever the length of the voyage, and not bound to North America, allowed to proceed on the voyage without a duly qualified medical practitioner on board. Ships bound to North America, and allowing fourteen instead of twelve feet superficial space for each passenger, may clear without a medical practitioner; but no vessel to clear without a medical man if the passengers exceed 500. *Diseased persons* to be re-landed and entitled to recover their passage money. *If passage not provided* by owner, according to contract, passage money to be returned with compensation. *Subsistence money* at the rate of one shilling per day for each passenger, to be paid by the owners in case the time fixed for sailing be deferred. *In case of wreck* another vessel to be provided for the passage, or compensation may be recovered. Passengers to be maintained and lodged during the voyage and for forty-eight hours after arrival. Surgeon, or in his absence the master, may exact obedience to rules and regulations, and persons obstructing, liable to a penalty. For *facilitating the emigration of poor orphans and deserted children under sixteen years of age*, guardians of the poor are empowered to expend money in and about the emigration of such children having no settlement, and who are chargeable; but such emigration not to take place without previous consent of the child, signified before justices in petty session, and a certificate of such consent signed by two of the justices present, has been transmitted to the Poor Law Board.

EMIGRATION.—Before a person takes the important step of emigrating to a distant land, he should take every possible precaution to assure himself that he is acting wisely, as regards both his present and future circumstances. Emigration entirely alters a person's position in life, by diverting the current of his every-day existence and

placing him in the midst of new aspects and influences. It also creates a wide gap in the ordinary routine of commercial duties, and entails the positive sacrifice of a year or more, which the leaving the old country, and the settling down in the new, necessarily occasion. Before these sacrifices are made, therefore, an intending emigrant should consider whether he is fitted by nature and habit to undergo the trials and grapple with the difficulties he is sure to meet with. An emigrant should possess a tolerably good constitution, and a fund of energy and animal spirits, capable of surmounting obstacles and breasting dangers. He should be capable of adapting himself to every variety of situation, and turning his hand to any kind of employment that emergencies may demand. Unless he possess these, he will, if he emigrates under ordinary circumstances, experience that disappointment and chagrin which has driven so many emigrants back to the mother country almost as soon as they have lauded on the strange shore. Mechanics and agricultural labourers are undoubtedly best fitted for emigration, as their previous habits have rendered them to a certain extent hardy and indifferent to the vice observances of society; while the labour and handicraft they are accustomed to are just such as are required in a young and uncultivated country. But if a person ordinarily removed above this sphere has determined upon emigrating, he should, previous to setting out, obtain a practical knowledge of several branches of industry; especially farming, grazing and agriculture, and the trades of bricklayer, carpenter, and smith.

The precise quarter of the world to which a person should bend his steps it is difficult to decide upon; each has its distinctive characteristics, and peculiar advantages and disadvantages; the main consideration with all emigrants, however, is the speedy realization of an independency, and this achievement depends more upon the emigrant himself than upon the locality he emigrates to. Books:—*Marshall's Emigrant and Farmer's Handbook* 6s.; *Cunningham's Hints*, 5s. 6d.; *Cotton's Guide*, 4s.; *Curtis's Guide*, 6s.; *Phillips's Guide*, 1s.; *Hearsthouse's Where to Go*, 1s.; *Tegg's Handbook*, 4s.; *Kingston's How to Emigrate*, 2s. 6d.; *Matthew's Emigration Fields*, 3s. 6d.; *Butler's Handbook of Facts*, 3s.; *Burton's Manual*, 4s. 6d.; *Kent's Information*, 1s. 6d.; *Washbourne's Counsel*, 4s.; *Newhall's British Handbook*, 1s. 6d.; *Earp's Handbook*, 1s. 6d.; *Warr's Emigrant's Friend*, 2s.; *Rosier's Canada*, 2s.; *Lang's Australia*, 1s.; *Haydon's Australia*, 6s.; *Mackenzie's Australia*, 3s. 6d.; *Carmichael's New South Wales*, 1s. 6d.; *Dyrne's New South Wales*, 1s.; *Mann's Port Stephen*, 1s.; *Wiley's United States*, 2s.; *J. C. Smith's United States*, 2s. 6d.; *Smith & Elder's United States*, 2s. 6d.; *Hill's Introduction*, 5s.; *Frazer's Medical Guide*, 3s.; *Kingston's Emigrant Voyager's Manual*, 1s.; *Hogg's Medical Guide*, 1s.; *Austed's Gold-seeker's Manual*, 3s. 6d.; *Wood's Gold Diggings*, 4s. 6d.; *Tulloch's Gold Diggings of Victoria*, 21s.; *Hargrave's Australian Gold Fields*, 5s.; *Mackenzie's Australian Gold Fields*, 1s.; *Atso's California*, 1s.; *Bryant's California*, 2s. 6d.; *Fremont's Guide to California*, 4s. 6d.

EMOLLIENTS.—This word signifies to soften; and is applied to those drugs and substances that have the power of relaxing the fibres of the body, and are principally employed to allay pain by rendering expansive the tense skin, as in cases of slow suppuration, and also to facilitate the after absorption of any application. Though divided into several varieties, the most simple, and at the same time the most universal and beneficial, is "warm moisture," either used as hot water, or a poultice made of bran or bread. These may be said to be in a measure confined to all kinds of suppuration or abscesses. The *relaxing emollients* are those employed for the swelling that succeeds sprains, &c., and are decoctions of camomile, mallow—marsh and common—and other vegetable substances. The *lubricating emollients* are composed of fixed or fluid oils, and are employed to excite absorption by the stimulus of friction. These consist of sweet oil, palm oil, lard, or other unctuous compounds; and the *clonic emollients*, a set of remedies that to the effects produced by other emollients superadd that of an anodyne or soother; these consist of decoctions of poppy-heads, or hemlock, or sweet oil in combination with laudanum.

EMPLOYMENT.—To persons seeking employment, various means are available by which it can be obtained. The first thing for a person so situated to do, is to make the fact known as widely and extensively as possible. For this purpose, he should go daily to the various establishments in his peculiar line of business, and make his want known both to the principals and the assistants; the latter frequently knowing of vacancies existing in other establishments, when there may not happen to be any in their own. These personal applications must be renewed from day to day, until the object is accomplished. And although seeking for employment is frequently an irksome and unsuccessful task, the applicant, by calling patience and perseverance to his aid, will spare himself from being disheartened, and ultimately achieve success. In seeking employment, much depends upon the applicant's manner and address; if he is rude and ungainly, and expresses himself in an awkward manner, an employer will at once conceive a prejudice against him, and curtly decline the proffer of his services. But if, on the other hand, he is pleasing in his manners and address, he will not only be engaged to fill a vacancy, but will sometimes be taken into the establishment, although no vacancy exists. Applicants for employment should also be scrupulously neat in their attire, and clean in their persons; for an employer naturally argues, that a person who is careless of himself, will be equally so about his business. Another important feature to be borne in mind is punctuality, and in every case where an appointment has been made, it should be kept to the minute. The want of observing this, not only gives an employer a prejudicial impression of the applicant's general habits, but so irritates him for the time being, that

the tardy applicant has frequently a message left him, "not to trouble himself to call again." Another medium by which employment may be sought, is through a "registry office," many of which are established in London and other cities, and large towns. At these offices, lists are kept of persons requiring servants and assistants, which may be consulted for a small fee, and the persons waited on accordingly. Simultaneously with these personal applications, advertising in the public newspapers should be adopted. *The Times*, as having the largest and widest circulation of any journal, is usually considered the best medium, and on general principles, it undoubtedly is; but when any specific trade or profession is to be appealed to, it is more directly accomplished through the medium of a newspaper in the interests of the particular class.—See ADVERTISEMENT, APPOINTMENTS, SITUATION.

EMULSION.—The vegetable albumen of almonds. It is white, soluble in cold water, and coagulated by heat and alcohol. Also a milky fluid, formed by the mechanical mixture of oil and water, by means of some other substance that possesses the power of combining with both.

ENCYCLOPEDIA.—A work containing definitions or accounts of the principal subjects in one or all departments of learning, art, or science. The important feature in an Encyclopedia is, that it brings within certain limits the scattered information of many volumes, and thus a ready reference to any particular item sought for. A great number of this class of works have been published from time to time, possessing various degrees of merit, and distinctive characteristics; for general purposes, however, the following are generally admitted to be the most useful:—*Encyclopedia Britannica*; *Encyclopedia Metropolitana*; *Penny Encyclopedia*; *Popular Encyclopedia*; *Edinburgh Encyclopedia*; *Encyclopedia Edinensis*; *Oxford Encyclopedia*; *Kees's Encyclopedia*; *Wike's Encyclopedia Londinensis*; *English Encyclopedia*; *British Encyclopedia*; *Pantologia*. These are expensive works, if purchased at the published price; there would be no difficulty, however, in obtaining any of them second-hand at a considerable reduction; taking care at the same time to procure a recent edition.

ENDIVE, CULTURE OF.—The seed for this plant must be sown twice, thinly scattered; the first sowing about the beginning of June, the second in July; when the plants are about three inches high, they should be transplanted in rows a foot asunder, and a foot apart, taking care to water them in dry weather. As the transplanted crops approach to full growth, sticky, and full in the heart, some should have the leaves tied up every week or for a fortnight, to blanch or whiten, and to render them tender, crisp, and mild-tasted. Perform this on dry days; and in winter, when the weather is dry without frost. Using strings of fresh bast, or small osier twigs, tie the leaves regularly together a little above the middle, moderately close. If the soil be light and dry, earth them half way up; but if moist, merely tie them. The blanching will be

completed sometimes in a week, when the weather is hot and dry; at others, it may take a fortnight or three weeks; after which the endive should be taken up for use.

ENDIVE, PROPERTIES AND USES OF.—This plant is chiefly used for winter salads, as a substitute for lettuce. It contains a bitter quality, which is considered a good stomachic.

ENDIVE, TO DRESS.—Chop endive very fine, boil it first, then put it into cold water; then drain the water off, and squeeze it out till quite dry. Take a good tablespoonful of flour, and a piece of butter about the size of a walnut, mix them well near the fire, and boil them in a pipkin. Put this mixture with the vegetable, and about a teacupful of water, for fear of burning; add a little salt and pepper, and boil till done.

ENGINEERING.—Books: *Engineer's and Machinist's Assistant*, 84s.; *Blunt's Civil Engineer*, 5 parts, 21s. each; *Dempsey's Railway Practical Engineer*, 52s. 6d.; *Mudie's Engineer, Surveyor, and Architect*; *Blackie's Drawing Book*, 40s.; *Herbert's Encyclopedia*, 30s.; *Haswell's Pocket Book*, 8s. 6d.; *Templeton's Pocket Companion*, 5s.; *Ryde's Companion*, 10s. 6d.; *Templeton's Book of Reference*, 5s.; *Adcock's Pocket Book*, 6s.; *Wallar's Guide*, 1s.; *Ryde's Text-Book*, 28s.

ENGLISH STEW.—Cut cold meat of any description into slices; pepper, salt, and flour them, and lay them in a dish; take pickles of any or of every kind at discretion, sprinkle them over the meat; then add half a teacupful of water to a small quantity of the vinegar belonging to the pickles, a little mushroom, and any gravy that may be set by for use; stir all together, and pour it over the meat. Set it before the fire in a Dutch oven, or in the oven of the kitchen range, for about half an hour before dinner time.

ENGRAVINGS, TO COPY.—Mix ten grains of bichromate of potash, and twenty grains of sulphate of copper, in one ounce of distilled water. Spread this mixture over common writing-paper, and let it dry; then place the engraving, face downwards, on the prepared side of the paper, cover them with a piece of plate glass, and expose to the sunshine. In about half an hour, a faint copy is produced in yellow. This must be washed over with a solution of nitrate of silver, twenty grains, to an ounce of distilled water; and when washed over, a beautiful red picture makes its appearance. Fix by washing in pure water. If it be desired to change the colour of the picture, soak it in salt and water till it disappears; then hold it in the sun for five minutes, and the same picture again appears in a fine lilac colour.

ENIGMA.—A proposition put in obscure, ambiguous, and generally contradictory terms, to puzzle the understanding, and exercise the ingenuity of those to whom the enigma is propounded. Enigmas may be founded upon simple catches, thus:—

"Though you set me on foot,
I shall be on my head."

The answer is, *A nail in a shoe*. One of the most ancient and celebrated specimens of

the enigma, is that which was proposed by the Sphinx and solved by *Ædipus*, in the following terms:—"What is that which goes upon four legs in the morning, two at noon, and three at night?" The answer is, *Man*. For in the morning, or infancy of life, he crawls upon his hands and feet; at noon, or in manhood, he walks erect; and at night, or in old age, he requires the assistance of a stick. The enigma may be usefully applied, and serve the double purpose of amusement and instruction, by making it the medium for conveying scientific problems, artistic combinations, and literary information. Book: *The Family Pastime*, 1s. 6d.

ENLISTMENT.—A person receiving the one shilling *smart money* from a recruiting officer, and being further attested before a magistrate, and examined by the surgeon, accepts service in the army, and may not leave it without being considered and punished as a deserter. Persons may, however, be *bought off*, the terms and conditions being usually a matter of arrangement with the commanding officer of the regiment. No person can be enlisted as a soldier for a longer term than ten years in the infantry, or twelve years in the cavalry, artillery, or other ordnance service, such term to be reckoned from the day of enlistment; or if such person be under eighteen years of age, from the day on which he attained such age. Soldiers during the last six months, or at the end of their term of service, may re-enlist for a further term of eleven years, or for twelve years in the cavalry or artillery. If while on foreign service, the soldier's time shall expire, his term may be prolonged by the commanding officer of the station for the further term of two years, and if any soldier, after the completion of his second term of service, shall give notice to his officer of his willingness to continue, he shall be allowed to do so until he give three months' notice of his desire to be discharged; but if, at the expiration of such term, he shall be unwilling to re-enlist, he shall be conveyed home with all convenient despatch unless he desire to remain in the colony. If the term of service shall expire after the committal of any offence, he is to be considered as in the service till after the trial and during punishment, if any, for the same, but for no other purpose. The term of enlistment for the royal marine forces is limited to twelve years, with the same limitations and conditions as the preceding act relating to the army service.

ENTOMOLOGY.—The science which treats of the organization, habits, properties, and classification of insects. Books: *Entomologist's Annual*, published yearly, 2s. 6d.; *Stainton's Companion*, 3s.; *Westwood's Text-Book*, 5s.; *Kirby & Spence's Treatise*, 31s. 6d.; *Curtis's British*, parts 3s. 6d. each; *Catlow's Popular*, 10s. 6d.; *Dallas's Entomology*, 8s. 6d.; *The Little Entomologist*, 1s.; *Shuckard's Elements*, 8s.; *Stephens's Manual*, 14s.; *Newman's Grammar*, 8s. 6d.; *Burmeister's Manual*, 20s.; *Newman's Introduction*, 12s.

ENVELOPE.—A well-known receptacle in which epistolary correspondence is gene-

rally enclosed. The best kind of envelope is the "cream laid," with opaque or coloured interior, which prevents the correspondence being read from without. The size of the envelope, especially those employed for commercial purposes, should be sufficiently large to admit the sheet written on when folded into three. Envelopes used for social intercourse and for complimentary purposes may, without any offence to propriety, bear upon them neat and appropriate designs and mottoes, with coloured and fancy edges. It is also customary among the better classes to use envelopes with the crest impressed upon them. For business purposes, the name and address printed around the adhesive portion of the envelope is an excellent device, as it at once indicates the nature of the communication, and may thus be opened and answered by an assistant in the absence of his principal. The back of an addressed envelope should accord with the face, that is to say, with the adhesive lappet and the superscription both tending downwards; the contrary practice betrays vulgarity or negligence. The backs of envelopes have frequently a soiled appearance, owing to the adhesive lappet being pressed down by a dirty or inked finger; to avoid this, a piece of blotting or other paper should be interposed between the envelope and the hand. Low-priced envelopes should not be used, as they have a mean appearance, and are insecure. With important communications it is always as well to use sealing-wax in addition to the ordinary fastening. Envelopes which are impervious to water are made for special purposes, and may be advantageously employed for ship letters and foreign correspondence. — See ADDRESSES OF LETTERS.

EPILEPSY, OR FALLING SICKNESS.—This is a disease coming on in convulsive paroxysms, returning at undefined and irregular periods, accompanied by great muscular exertion, foaming at the mouth, loss of memory, voluntary motion, and ending in sleep or a state of coma. The attacks are often sudden, the patient without notice falling to the ground; at other times it is preceded by a sense of weight in the head, drowsiness, and languor, indicating the approach of the fit. The causes of epilepsy are various; in some cases it is hereditary, in others it proceeds from softening of the brain, or organic disease of that organ and spinal marrow; it sometimes results from blows, very frequently in children from worms, or other sources of irritation in the bowels or stomach. Epilepsy is most frequent in the young, the spare, and those of a delicate organization.

Symptoms.—The fit usually begins with an excessive and involuntary action of the muscles, the body is bent forward, or drawn violently backward with great force, the eyes roll in a rapid and furious manner, the lips are convulsed, and a frothy saliva, like the clasp of a horse, covers the lips and teeth; the tongue is violently protruded, and often dreadfully injured by the spasmodic closing of the teeth, the pulse is quick and irregular, the breathing heavy and

laboured, the muscular action of the arms and legs and the writhings of the body are immense, and often more than five or six strong persons can restrain, even in a woman. After a time, which varies from ten minutes to half an hour, nature becomes exhausted, and the patient sinks into a state of sleep, or more properly coma, from which in a few hours, he awakes exhausted, low, and feeble. The only diseases with which epilepsy could be confounded are hysteria and apoplexy; from the first, it is known by the absence of tears, sobs, and laughter, and the rising in the throat, like a ball or lump, that always characterizes it; and from apoplexy, by the stertorous breathing and the dilated pupil.

Treatment.—Where the patient is young, and it is the first attack, bleeding to a small extent is advisable; but in general, beyond the exhibition of stimulating draughts of ammonia and brandy, cold water dashed on the face, and heat applied to the feet, little or nothing can be done during the paroxysm beyond putting a gag in the mouth, and fastening it behind the head, so as to save the patient's tongue; the treatment must be left till after the fit, and the remedies used with the hope of preventing a recurrence of the attack. When epilepsy proceeds from disease of the brain or spinal column, a seton should be established in the neck, the general correction of the system attended to, by change of scene, a course of mineral waters, a plain but unexciting diet, and the daily use of the subjoined pills, marked 1 and 2, continuing each for three weeks, resting one week, and then beginning the other exactly with the same routine. It may be here remarked, that no medicine has been found so efficacious in epilepsy as nitrate of silver or lunar caustic, and after that a preparation of copper. No. 1. Take of

Nitrate of silver . . . 4 grains.
Bread crumbs . . . 1 drachm.

Mix.

Extract of gentian, sufficient to make a mass, which divide into twenty-four pills, of which give one, three times a day. No. 2. Take of

Ammoniate of copper . . . 6 grains.
Bread crumbs . . . 1 drachm.

Mix well, and add

Extract of camomile, enough to make into a mass, which divide into twenty-four pills, one to be given three times a day.

When epilepsy is symptomatic, or the cause of worms or irritation in the bowels, it must be treated according to the provocative cause; in other cases, a course of mild aperient medicines should be adopted, and the bowels kept regularly open; exercise by walking, sea bathing, early hours, and such pastimes as give a healthy tone to the mind steadily persisted in. For the tremor that sometimes follows the recovery from the fit, the following antispasmodic mixture will be found efficacious, though, as a general rule for symptomatic epilepsy, a regular diet, change of scene and air, exercise, and a constant mild action on the bowels, will

be found sufficient, following, where worms are present, the advice given under that head. Take of

Valerian root . . . 2 drachms.
Serpentaria root . . . 1 drachm.
Boiling water . . . $\frac{1}{2}$ pint.
Infuse for six hours, strain, and add
Spirits of hartshorn . . . 3 drachms.
Sulphuric ether . . . 1 drachm.

Mix, and give one or two tablespoonfuls three times a day. By adding half a drachm of quassia to this infusion, a tonic property will be added to the antispasmodic effect of the mixture.—See WORMS.

EPSOM SALTS.—A compound synonymous with sulphate of magnesia. It was originally extracted from the saline springs of Epsom, in Surrey, and is now exclusively prepared on the larger scale, and from either magnesian limestone, or the residual liquor of the sea-salt works. Epsom salts is extensively employed as an active and cooling purgative. Large doses should, however, be avoided, especially as it has been proved, that a small quantity of Epsom salts, largely diluted with water, will usually purge as much as the common dose. Epsom salts is frequently mixed with senna, to assist its operation.

ERUPTIONS ON THE SKIN.—The common cause of all these affections may be traced to the stomach, and is excited and kept alive by some faulty state of that organ, and sometimes the liver acting sympathetically with the stomach. The rash called "surfeit," that so often follows a supper of shell-fish, mushrooms, and other articles of diet, are good illustrations of this kind of eruption, the consequence of functional irritation. The treatment in all affections of this nature should begin with an emetic, if the case is severe, or a warm bath; a dose of magnesia and soda, to correct any acidity in the stomach, and a pill every four hours, of equal parts of colocynth and blue pill. As soon as the bowels are relieved, the rash will disappear, especially so if, in addition to the warm bath, the body has been well rubbed while in the water. For eruptions, the consequence of diseased action, see SCROFULA, SCURVY, &c.

ERYSIPELAS.—An irruptive fever, attended with a peculiar redness of the skin, with or without swelling, usually coming on with loss of appetite, cold chills, great confusion in the head, nausea, and vomiting; tongue moist and coated with white fur, pulse quick and hard, though sometimes small and wiry, as the fever varies in its type from inflammatory to typhoid; and when the symptoms run high, there is also delirium and coma. Between the second and third day the cuticle on some part of the body becomes inflamed of a florid red colour, presenting the appearance of innumerable insect bites, at first circumscribed, but after a time spreading in one or more broad patches. Sometimes the swelling is excessive, and if on the face, quickly puffing up the lids and closing the eyes. After a few days the inflammation subsides, either by a disquamation or peeling off of the cuticle, or

by the formation of small vesicles of water. Erysipelas is very apt to fly from one part of the body to another, or to terminate in an abscess, and in bad cases, by gangrene. The persons most subject to attacks of this disease are those of mild life and age; and though it often seizes on the robust and plethoric, it as frequently assails the weak and enfeebled. It is very generally excited by cold, indigestible matters in the stomach and bowels, by intemperance, and by contagion, inflammation, and wounds. The favourable symptoms in an attack of erysipelas are, the inflammatory blush, becoming of a yellowish brown, the subsidence of the swelling, without vesicles, diminution of the fever, and absence of coma. The unfavourable, when the fever becomes protracted, and assuming a typhoid character, by the eruption suddenly receding by livid vesicles, increased coma, and a small weak pulse.

Treatment.—As this disease may either assume a typhoid or an inflammatory character, the treatment adopted must be in accordance to whichever of the two the erysipelatous action mostly tends. When inflammatory, the object is to reduce the arterial action, both in the system and part; when of a typhoid character, to support the strength and stimulate the heart. Besides these, the head and other important organs must be guarded from the danger of congestion. Bleeding, which in other inflammations would be imperative, must in erysipelas be adopted with great caution, and then only employed in the young and robust, and never repeated; while in advanced life, or in the weak and sickly, it is contra-indicated. As a general rule, the treatment should begin with an emetic, composed of ten grains of ipecacuanha, and one grain of tartar emetic, dissolved in water; and an hour after the vomiting has subsided, the following mixture in doses of two tablespoonfuls, every four hours.

Epsom salts . . .	1 ounce.
Rochelle salts . . .	$\frac{1}{2}$ ounce.
Camphor water . . .	8 ounces.

Dissolve, and add
Antimonial wine . . . 3 drachms.

Mix. When the bowels are much confined, the annexed powder is to be given each night, at bed-time, for two or three times.

Calomel . . .	3 grains.
Antimonialis . . .	5 grains.
Jalap powder . . .	10 grains.

Mix. If the head is particularly affected, and the drowsiness or coma is severe, a blister should be put on the nape of the neck, and bottles of hot water kept constantly at the feet; at the same time the local inflammation is to be covered with violet powder or common flour, and where the action has a typhoid character, the part is to be frequently dusted with chalk and camphor, prepared by mixing one drachm of powdered camphor with two ounces of prepared chalk. Where the debility is great, and with patients advanced in life, instead of the emetic, the treatment should commence with the aperient mix-

ture, and, if necessary, one of the aperient powders; and when the bowels have been properly excited, the patient's strength is to be supported by a light and generous diet, a small quantity of wine or brandy and water, and the following mixture in doses of one tablespoonful, every two hours.

Aromatic confection . . .	1 drachm.
Carbonate of ammonia . . .	$\frac{1}{2}$ drachm.
Peppermint water . . .	8 ounces.

Mix thoroughly, and add
Compound tincture of bark . . . $\frac{1}{2}$ ounce.
Laudanum . . . 1 drachm.

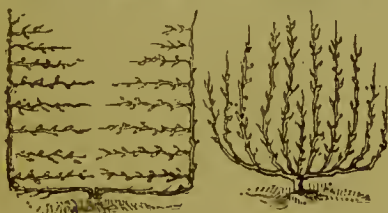
Mix. In such a disease as erysipelas, presenting a mixed character of symptoms, the treatment is often compelled to embrace opposite modes of practice; and though it must generally commence by the employment of depleting agents, the treatment nearly always ends by the employment of tonics and stimulants, and as soon as the vesicles begin to form, or the cuticle to peel off, the above cordial tonic mixture is to be employed, with the addition of wine, broths, and boiled meats. For the local erysipelas, when the swelling is considerable, the dry powders must be changed for warm fermentations of camomiles, hemlock, or poppy-heads, repeated every two hours; while in severe cases, the alternation of the hot fomentations with a cold sugar of lead lotion, is not only necessary, but frequently most beneficial. Where the erysipelas attacks the head and face, the greatest relief will be found from fomentations of camomiles and poppy-heads, made strong and used hot; the feet throughout are to be kept warm, the stomach and bowels attended to, the coma and pains in the head relieved by a blister on the neck, or a couple of leeches on each temple, and the strength supported by a nutritious diet, and the aromatic mixture with wine and other stimulants.

ESPALIER.—A system in horticulture in conconnection with the training of fruit trees. The espaliers are generally formed of upright and cross-bars of wood, but sometimes made of cast-iron. The best are of wood, and from four to five feet in height. To these the trees are trained as on a wall, with this difference, that instead of being nailed, the branches are usually tied; the fastenings are soft hemp cord or strips of bast; but twigs of willow answer much better. The situation of espaliers is generally along the side walks; and if the trees be carefully trained, they have a neat effect. Care must be taken that they do not prevent the sun and air from reaching the surrounding vegetation. The following is the plan of cultivation: Have the ground well trenched and manured, and plant the trees three or four feet from the walk, and twice as near to one another as they should afterwards be when full-grown. The reasons for this close planting are, that the value of a few crops is more than the expense of the trees; the rails are sooner covered, and when the trees begin to meet and incommode one another, you can then, having ascertained their various qualities, give scope to the

best, by diminishing or rooting out the less worthy. To incur no more expense than is necessary, the stakes may be placed two feet apart, in which case the annual shoots will require to be conducted from one resting-



place to another, by pieces of bast or wild briar, or willow of two years' growth. These conductors require a firm and separate tying, distinct from that which fastens more loosely the living wood; they thus give strength to the rails, and provide for straighter training than is commonly done



by having the stakes twice as thickly set, and consequently at double the expense of timber. Espaliers may be trained in a great variety of forms, those represented in the engravings being the best adapted for general purposes.—See APPLE, PEAR, &c.

ESSENCE.—The active and characteristic portion of a substance, or that on which its most remarkable properties depend.—See ANCHOVY, CELERY, CINNAMON, CLOVE, COFFEE, GINGER, LEMON-PEEL, ORANGE-PEEL, PEPPERMINT, ROSES, &c.

ESSENCE OF FLOWERS, TO EXTRACT.—Procure a quantity of the petals of any flowers which have an agreeable fragrance, card thin layers of cotton, which dip into the finest Florence or Lucca oil: sprinkle a small quantity of fine salt on the flowers, and lay them alternately, a layer of cotton and a layer of flowers, until an earthen vessel or wide-mouthed glass bottle is full. Tie the mouth close with a bladder, then place the bottle in a southern aspect to the heat of the sun, and in fifteen days, when uncovered, a fragrant oil may be expressed from the mass, equal to the essences ordinarily purchased at perfumers' shops.

ESSENTIAL OIL.—The oil which floats on the water in the aqueous distillation of plants, fruits, &c. There is a more simple mode of obtaining the essential oil of lemons and oranges than by distillation: rasp the rinds, and as soon as there is enough to fill a tablespoonful, put it into a bottle, and carefully cork it up; continue the process in

the same way until the quantity required is obtained, thus preventing the admission of air and the consequent loss of aroma. When the pulp is ready, put it between two thick pieces of glass, and press out the oil, which must be kept in a closely stopped bottle. By dissolving these essential oils in spirit of wine, they form an elegant perfume for the toilet table.

ETHER.—A transparent, colourless, and perfectly liquid fluid, highly volatile, and extremely inflammable, possessed of a sharp penetrating odour, and a hot pungent taste. Ether is one of the most subtle and diffusible stimulants we have in the pharmacopœia, it is employed in medicine as a stimulant, a narcotic, and antispasmodic; and is particularly beneficial in all cases of prostration or oppressed action of the heart and lungs, in typhus or fevers of a low typhoid character. Ether is prepared from a mixture of spirits of wine, or alcohol, and sulphuric acid, or vitriol, and immediately subverting the product to a rapid distillation, the ether passing over in the form of vapour, to be condensed into liquid in the refrigerated receiver. Sulphuric ether boils in the air at the temperature of ninety-six degrees, and in a vacuum at twelve degrees below the freezing point. From its rapid evaporation it is capable of producing an intense degree of cold when poured or applied to any part of the body; at the same time it is excessively inflammable, and on that account should never be employed near the fire or a candle, as the most serious disasters might result from the sudden ignition of the vapour. Ether, being a powerful spirit, dissolves balsams, wax, volatile oils, bitumen, gum-resins, and resins. The dose of ether is from twenty drops to one drachm, when taken alone; but from its great inadmissibility in water, should be shaken up with that liquid before taking. Ether also dissolves gun-cotton, and forms that syrup-like liquid called collodium, used so extensively in photography. Besides the ordinary mode of employment, ether is occasionally inhaled in cases of asthma or difficult breathing, and before the introduction of chloroform, was extensively employed as an æsthetic agent, to render the system insensible to pain, during surgical operations.

ETIQUETTE.—The art of politeness and correct behaviour, not only in accordance with kind feeling and natural instincts, but also in obedience to certain laws laid down by society. It is the observance or the disregard of these rules which tend chiefly to distinguish the gentleman from the boor; and in order to enter good society, and to be received with a welcome, it is as necessary to practise etiquette as it is to be well dressed. The best method of attaining a knowledge of this important art is to observe the behaviour and gestures of persons moving in the best circles, and in similar exigencies to imitate, but not ape, the example that has thus been set. Much information may also be obtained from treatises that have been written from time to time upon this subject. Books: *Manual of Etiquette and Politeness*,

1s. 6d.; *Guide to English Etiquette*, 2s.; *Etiquette for Gentlemen and Ladies*, 1s.; *Ladies' Book of Etiquette*, 1s.; *Douglas's Etiquette of Fashionable Life*, 1s.; *Parisian Etiquette*, 1s.; *Hints on Etiquette*, 2s. 6d.; *Illustrated Etiquette*, 1s.

ETNA.—A utensil by which water may be heated or boiled in a few minutes. It consists of a tin vessel in form of an inverted cone, to hold the water, and this is placed in a cup of tin, into which a little spirit of wine or naphtha is poured, and set fire to. The flame striking against the sides of the cone very soon causes the water to boil. The handle is constructed to go inside when packed for travelling.



EVERGREEN HEDGE.—To produce a hedge that is almost impregnable, plant strong white thorn three to four feet in height, and eight inches apart, and place them thus—XXX; plant a row of tree-box on the outside, and a row of evergreen privet on the other, and the hedge will soon rise.

EVERGREEN PLANTS.—These plants have the faculty of preserving their verdure through the winter, when other plants are perishing, and do not cast their leaves till a new spring has commenced, when other trees are leafing, or even later. With these plants the functions of the leaves are going on during all the winter, although languidly; they are constantly extracting sap from the earth through the springlets, and are, therefore, in a state of slow but continual winter growth. See HOLLY, LAUREL, MYRTLE, &c.

EXCHANGE.—In commerce this term is generally used to designate that species of mercantile transactions by which the debts of individuals residing at a distance from their creditors are cancelled without the transmission of money. Among cities or countries having any considerable intercourse together, the debts mutually due by each other approach, for the most part, near to an equality. There are at all times, for example, a considerable number of persons in London indebted to Hamburg; but, speaking generally, there are about an equal number of persons in London to whom Hamburg is indebted; and hence, when A. of London has a payment to make to B. of Hamburg, the former does not remit an equivalent sum of money to the latter, but goes into the market and buys a bill upon Hamburg, that is, he buys an order from C. of London addressed to his debtor D. of Hamburg, requesting him to pay the amount to A. or his order. A., having indorsed this bill or order, sends it to B., who receives payment from his neighbour D. The convenience of all parties is consulted in a transaction of this sort; the debts due by A. to B., and by D. to C., being extinguished without the intervention of any money. The

Par of exchange means the equivalency of a certain amount of the currency of one country to the other; thus, £1 sterling English is equal to 25 francs 20 centimes French, which is said to be the par between London and Paris. And the exchange between the two countries is said to be on par when bills are negotiated on this footing. When £1 in London buys a bill on Paris for more than 25 francs 20 centimes, the exchange is said to be in favour of London, and against Paris; and when, on the other hand, £1 in London will not buy a bill on Paris for 25 francs 20 centimes, the exchange is against London, and in favour of Paris. The exchange is made to diverge from par by two classes of circumstances; first, by any discrepancy between the actual weight or fineness of the coins, or of the bullion for which the substitutes used in their place will exchange, and their weight or fineness as fixed by mint regulations; and, secondly, by any sudden increase or diminution of the bills drawn in one country upon another.

EXCHEQUER.—A court of law consisting of two divisions, one of which possesses jurisdiction in matters of public revenue, while the other is subdivided into a court of common law and a court of equity. The judges are the Chancellor of the Exchequer for the time being, the Chief Baron, and four other barons. The Chancellor being one of the leading members of the cabinet, rarely, if ever, exercises his privilege.

EXCHEQUER BILLS are promissory notes issued by the Treasury under the authority of Parliament, and are the form in which the floating or unfunded part of the National Debt chiefly exists. These bills are circulated for sums varying from £100 to £1000, and are printed with ink of different colours; namely, £100 bills with red; £200, yellow; £500, blue; and £1000, black. The bills bear interest from their date, at the rate of from 1½d. to 2½d. per diem, per hundred. A date is fixed for their payment, which is announced by advertisement, and is generally about a year after their being issued, when they are either discharged or renewed for other bills, at the option of their holders. Parties neglecting to present their bills on the day appointed, are deprived of interest till the next opportunity of obtaining new bills, or else must submit to the loss of whatever premium they may chance to bear at the time. During the currency of these bills they may, after a limited time, be paid to the Government at par in discharge of duties and taxes. They are transferable without the necessity of a formal assignment, and form an eligible investment for capital that may require to be suddenly made available. Exchequer Bills are issued at the Exchequer Bill Office, Palace Yard, Westminster.

EXCISE.—The name given to the duties or taxes laid upon certain articles produced and consumed at home; but, exclusive of these, the duties on licences and post-horses are also placed under the management of the excise, and are consequently included in the excise duties.

EXCISE LICENCES.—These, within the limits of the chief office of excise in London, are granted by the commissioners or persons appointed by them for the purpose; within the limits of the cities of Edinburgh and Dublin, by the commissioner or assistant commissioners there, or persons employed by them; elsewhere, by the collectors and supervisors of the respective excise collections. Every licence contains the name and abode of the person taking out the same, the date and purpose for which granted, and the place where the trade or business shall be carried on. No excise licence is necessary for the sale of an excisable commodity while it is in the import warehouse, provided such sale be of not less than one entire package or cask, made to one person or partnership.

—See LICENCES.

EXCORIATION.—This term implies any abrasion, peeling off, or separation of the cuticle, by which the sensitive and true skin is left unprotected. Many persons are subject to excoriation or chafing from the slightest muscular exertion, more particularly in such parts as are exposed to friction. In general, excoriation is the result of inattention to the surface of the body, and is frequently excited by perspiration and dust or fine particles of sand adhering to the cuticle, and being rubbed by the play of the muscles into the lines and creases of the body. The perspiration secreted by fatiguing exertion will, from its acidity, if left on the body, very frequently act as an irritant on the cuticle and destroy its texture. Cleanliness, therefore, whether with adult or infant, is the best preventive against this painful affection. The treatment of excoriation, when occurring in those parts of the body usually covered, should consist in first washing the place with warm water, and when well dried by a soft towel, to be freely dusted with violet powder, repeating the application every two hours; for all that is necessary is to remove the exciting cause, and keep the part cool and covered. When the abrasion is deep seated, a piece of lint wetted with the liquor plumbi (extract of lead), is to be laid on for an hour, and on its removal the abrasion dusted with violet powder or common flour; no other lotion will be needed, and ointments or grease should never be employed.

EXECUTION.—A legal process by which the sentence of the law is put in force. Execution is of divers kinds. If the plaintiff obtain a verdict whereby the possession of land is awarded to him, a writ is directed to the sheriff, commanding him to give actual possession to the plaintiff; and the sheriff may justify breaking open doors if possession is not peaceably yielded. But if quietly given up, the delivery of a twig or turf, or the ring of the door, in the form of putting in possession, is sufficient. Execution in civil actions where money is awarded, may be entered against the body of the defendant, or against his goods or chattels, or against all three. Every writ of execution must be sued out within a year and a day after the judgment is entered. In a verdict obtained

out of term, execution may issue in fourteen days, unless the judge order an earlier or later day.—See ARREST, DEBTOR AND CREDITOR, WRIT, &c.

EXECUTOR.—A person to whom a man commits the execution of his last will and testament. If the testator make an incomplete will, without naming executors, or if he name incapable persons, or if the executors named refuse to act; the Ordinary must grant administration to some other person to perform the duties of executor. An executor may be appointed by express words, or by words that amount to a direct appointment; but, though a person is appointed executor, he is not obliged to act, unless he has performed the offices which are proper for an executor, as by paying or receiving debts, &c. If there are many executors to a will, and one of them only prove the will, and take upon him the executorship, it is sufficient for them all; but if the executors are appointed by will, and one of them prove the will, in the name of both, without the consent of the other, this will not bind him who refuses the executorship, unless he administer. If executors waste the goods of the testator, the Court of Chancery will, on application of the creditors, appoint a receiver of the testator's effects in order to protect them. Or, if they retain money in their hands, they are chargeable with interest and costs, if any have been incurred; but they are not liable for the property of the deceased, unless it has been lost through wilful negligence, or without taking reasonable care to prevent such defalcation. Neither is one executor answerable for money received, or detriment occasioned by his co-executor, unless it has been by means of some joint act done by them. If a creditor make his debtor executor, it is an extinguishment of the debt; for an executor cannot sue himself; but still, in equity, the executor's debt is assets with respect to the creditors, if the residue of the testator's estate is not sufficient; because it is extinguished, not by way of release, but in the way of legacy.

The duties of executors are, first, to bury the deceased in a manner suitable to his rank in life, and the estate he has left behind him. In strictness, no funeral expenses are allowed against a creditor except for the coffin, tolling of the bell, parson, clerk, and bearers' fees, but not for the pall or ornaments. But if there are assets sufficient, the allowance is regulated by the rank and property of the deceased. The next duty of the executor is to prove the will, which is done upon oath before the ordinary or his surrogate. This must be done within six months after the death of the testator, under a penalty of £50. After proving the will, the original must be deposited in the registry of the Ordinary, and a copy is made and delivered to the executor, called the probate. After obtaining probate, an inventory must be made of all the goods and chattels of the testator, which, if required, must be delivered to the ordinary on oath.

Disposition of assets.—All the assets that come into the executor's hands must be dis-

posed of in the following order:—1. The executor must pay all funeral charges, the expenses of proving the will, and other necessary outgoings incurred in the execution of the trust. 2. He must pay all debts due to the Queen. 3. Such debts as are due by particular statutes; as money due for poor-rates, post-office letters, or to a friendly society. 4. Debts of record on judgment of courts of law, and debts due on mortgage. 5. Debts due on special contract, as for rent in arrear, and debts due on bond or covenant under seal. 6. Debts on simple contract, as promissory notes, bills of exchange, or verbal promises; and, lastly, legacies must be paid. If an executor pay debts of a *lower* degree first, and should there be a deficiency of assets, he is bound to answer those of a higher nature out of his own estate.—See ADMINISTRATION, PROBATE, WILL, &c.

EXERCISE is essential to the healthy performance of the functions of both body and mind. Without it, the frame becomes contracted and enfeebled; the internal functions of the body deranged, and the brain lethargic and incapable of any great mental effort. With it, the machinery of life goes on with vigour and regularity, and the mind is stimulated to healthy action. With persons whose occupation is sedentary, the taking of regular exercise at stated periods is absolutely necessary to prevent them from suffering from dyspepsia and a number of painful disorders that follow in its train. The precise amount of exercise required depends in a great measure upon a person's strength and his general habit of body, but under ordinary circumstances every person should pass at least two hours daily in entire open air exercise; nor is it wise for persons in generally robust health to refrain from taking out of door exercise because the weather is inclement; with proper precaution the frame may be protected against the external influences of the elements, and under this condition the exercise imparts almost as much benefit as though the weather were fine. On such occasions the delicate may take exercise within doors, selecting a large room for the purpose with the windows open, and walking backwards and forwards for an hour or more. Females, from education and inclination, are apt to neglect this important duty. But were they to attend to it, not only would they derive considerable bodily and mental benefit, but they would bestow additional grace and elegance on their movements, and promote a more perfect development of their figures. Neither age nor sex are exempt from this salutary law of nature; we are all formed with certain limbs and muscles which obviously demand exercise by which they may derive an amount of nourishment sufficient to enable them to perform their functions effectively; and if this necessity is disregarded, it will entail sooner or later a long train of ills, which are the more to be deplored because they may be so easily prevented. Some persons err on the other side, and take exercise in excess, and by one imprudent act, "knock themselves up" (as it is familiarly expressed), for several days or even weeks

subsequently. Nothing can be more shortsighted and unpardonable than this, for when sufficient exercise has been taken, the symptoms of fatigue are so unmistakable, that it is impossible not to know when to desist. The time for taking exercise must in many cases be regulated by a person's avocations; generally speaking, however, especially in large towns, the earlier part of the day is the most suitable, as the air is then purer, and the frame more active and vigorous. It should also be borne in mind that violent exercise either immediately before or after a hearty meal, is liable to produce injurious effects.—See CHILDREN, GYMNASTICS, HORSE-RIDING, WALKING, &c.

EXHAUSTION may proceed from many causes, as the state of physical collapse that follows resuscitation from drowning, any great bodily fatigue, or long endurance of hunger, or there may be a bodily exhaustion consequent on long-sustained mental labour. Besides these causes, the system is often reduced to a state of exhaustion from the length or severity of disease, but in every form of physical prostration measures must be immediately taken to correct so serious a state of the function, which, if not relieved, may result in syncope and coma. The treatment in all cases should embrace two objects, to rouse the sinking powers, and give the stomach occupation. Consequently, wherever possible, the stimulant demanded by the case should combine with it aliment, or some sort of sustenance, as brandy and gruel, broth and crumbs of bread, or wine sop. In whatever form the restorative is administered, the conditions of blending some amount of substance with the liquid should be always complied with. The cases where diffusible stimulants are absolutely necessary are very rare and exceptionable. In all cases of exhaustion, the body should be kept warm, and heat applied to the feet.

EXPORTS.—Goods sent outwards or beyond the seas. The laws pertaining to exports enact that no goods can be shipped, or water-borne to be shipped, in any place in the United Kingdom, or the Isle of Man, to be carried to parts beyond the seas, before due entry outwards of ship, and entry of goods have been made, and cocket granted; nor before the goods have been duly cleared for shipment. The person entering outwards, goods to be exported, must deliver to the collector or comptroller of customs a bill of entry fairly written, in words at length, expressing the name of the ship, and of the master, and of the place to which the goods are to be exported, and of the person in whose name they are to be entered, and the quantities and proper denominations or descriptions of the several sorts, and must pay any duties due upon the exportation; and deliver at the same time one or more duplicates of the bill, in which sums and numbers may be expressed in figures. The particulars in the bill must be so written and arranged, and the number of duplicates must be such as the collector and comptroller may require. The collector and comptroller then cause to be prepared and sign a cocket

for the goods, to be delivered to the person who makes entry, and who is responsible for the proper use of it. This process need not necessarily be performed by the exporter himself, but may be done through the medium of a custom-house agent on the payment of a small fee.

EXPOSURE TO WEATHER.—Under this head are understood all those casualties and accidents to which the body is subject from vicissitudes of climate. The narcotic effect produced on the senses by long exposure to cold or snow is well known to most persons, but the prostrating influence is so powerful, and comes on so insidiously, that the victim forgets the fatal consequences of yielding to the drowsy fit in the numbing apathy that creeps over him; for, if gratified, the sleep in a few minutes becomes a coma, which deepens into an apoplexy that defies all the remedies of art, and in a brief time extinguishes every vestige of life. Sleeping all night in the open air, or in the cold and wet, very often produces effects entirely analogous to those induced by snow and polar frosts, and requires most judicious care in the treatment; or what in these cases was only coma, by a rash rousing of the functions, may be converted into a congestive apoplexy that renders nugatory every exertion. The patient should, therefore, be very carefully treated, the functions being gradually and slowly restored to their operation, and on no account rudely forced back into action, as such a course can only lead to a reaction as fatal as it is brief. The best mode of procedure is to undress the patient quickly, and if the body be wet, it is to be dried and placed between blankets in bed; all but the face being closely covered up, two bottles of hot water are then to be applied to the feet, and after a time another placed under each arm, a hot flannel laid over the stomach, and, if necessary, other bottles between the thighs. As soon as the patient is placed in bed, and heat applied to the feet, the use of internal restoratives must commence. These should consist of gruel with a small amount of spirit, of which a tablespoonful should be given every few minutes till the patient recovers the power of swallowing, when longer intervals must elapse; and after a time broth thickened with crumbs of bread administered, but no solid substance or animal food should be given for the first twenty hours. Should the pulse become hard, or the head exhibit any sign of excessive action, a blister must be put on the neck, and when required, mustard poultices to the feet, to subdue any congestive symptoms that may arise.—See EXHAUSTION, FROST-BITE, SUN-STROKE, &c.

EXTRACT.—The production of a solution of the soluble portion of the substance operated on; and the reduction of this solution by evaporation to a certain consistence.

EYE.—Most of the affections of this organ will be found under their several heads of cataract, ophthalmia, &c. In this place the only disease noticed will be that condition of the organ known as general inflammation, and those affections that belong

to the appendage of the eye. Inflammation of the eye commences with heat and pricking, and a sense of tightness in the part; the upper lid first and then the lower, become red, swollen, and extremely painful, attended with great tenderness when pressed, the eyeball itself is blood-shot, intolerant of light, and feels as if particles of sand were between the ball and the lids, the surrounding parts sympathize in the swelling, and there is an abundant flow of tears. The constitution at the same time suffers, there is more or less fever, a quick pulse, and considerable pain in the head.

Treatment.—The patient should either be bled from the arm or cupped on the temple, four or six leeches applied round the orbit, the bowels at the same time acted on quickly by one of the following powders every three hours, and a dose of the accompanying mixture every four hours, till they are thoroughly relieved, the patient all the time being kept quiet, and in a darkened room.

Powders.—

Calomel	12 grains.
Antimonialis	12 grains.
Jalap, powdered	2 scruples.

Mix, and divide into four powders.

Mixture.—Take of

Infusion of scenna	5 ounces.
Epsom salts	1 ounce.

Dissolve, and add

Syrup of buckthorn	1 ounce,
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Mix. Take two tablespoonfuls for a dose. After the leeches the eye should be fomented with warm water, or a decoction of poppy-heads, and should the skin remain dry and hot, a sweating draught must be given at bed-time, preceded by a mustard and water foot bath.

Draught.—Take of

Acetated solution of ammoniac	1 ounce.
Tincture of squills	30 drops.
Tincture of opium	30 drops.
Antimonial wine	1 drachm.
Spirits of nitre	2 drachms.

F.

FACE, AFFECTIONS OF THE.—Under this head must be comprehended Oedema, consequent on cold, tic-doloureux and other nervous affections, erysipelas, pimples, blotches, and other eruptive diseases of the cuticle. As many of the most serious and painful affections of the face are the result of some disorganization of the system, or disease more remotely situated, such as erysipelas, tic-doloureux, and toothache, these affections must be looked for under their respective heads; the present section being confined merely to those blotches and pimples that so often disfigure the countenance. These are sometimes of a scorbutic character; when they are distinguished by irregular red, or reddish brown patches on the cheeks

and nose, attended with heat and itching, occasionally disappearing and again returning, after the least excitement.

Treatment.—Take of corrosive sublimate two grains, spirits of wine, one ounce. Dissolve and mix, and take five drops in a wineglass of decoction of dandelion, or wormwood tea, three times a day, for a week; when it is to be intermitted for a few days, and again resumed in the same order and dose. In bad cases, a lotion made by mixing milk of sulphur in elder flower water, till the whole is of the consistency of cream, may be applied every night, in addition to the medicine, and washed off in the morning with warm water.

Black spots and freckles are to be treated by making an emulsion of bitter almonds, and dissolving in every half pint two grains of corrosive sublimate; and after softening the cuticle by bathing the face for a few minutes with warm water, applying the emulsion so prepared before going to bed, letting the lotion dry into the skin and washing well off in the morning. At the same time, a wineglassful of wormwood tea should be taken every day, either two or three times. In all affections of the skin, proceeding from functional disorder in the stomach, liver, or other organs, producing blemishes on the face, there is no remedy that exercises so permanently beneficial an effect as a course of wormwood; and the infusion should, therefore, in all cases where the complexion is injured, especially in females, be made the primary and principal remedial agent.

In long standing discoloration of the face, proceeding from impaired action of the liver, a steady course of alterative medicine must be persisted in for some time, if any permanent benefit is to be expected; and for this purpose, a compound Plummer's pill must be taken every night for one or two weeks, with a wineglass of the compound decoction of sarsaparilla twice a day; alternating this treatment every week or fortnight, by one of the following pills, and a decoction of dulseamara and dandelion, in the proportion of an ounce of each to a pint of water. *Pills*:—

Take of blue pill . . . 1 scruple.

Extract of colocynth . . 1 scruple.

Compound rhubarb pill . 1 scruple.

Mix, and divide into twelve pills.

At the same time, under either treatment, a warm bath should be taken once a week, and a constant friction kept up over the body; and especially above the region of the liver, while in the water, by the flesh-brush, or a rough irritating towel.

FACTOR.—This term implies the agent of a merchant or trader, constituted by letter of attorney, and whose power and responsibility are generally limited by the commission of his principal. If a factor buy goods on account of his principal, where he is used so to do, the contract will bind the principal to a fulfilment of the bargain. But where the goods are bought or exchanged without order, it is at the merchant's option whether he will accept them or turn them on the factor's hands. If a factor, by the

adventure of his principal's property, not authorized by the usage of trade or the terms of his employment, and without the express consent of his principal, occasion loss to the principal, he is answerable to the amount of the damage sustained; but mere negligence is not sufficient to make a factor liable; it must be gross carelessness, fraud, or a breach of positive orders. If a factor deals or speculates with the effects of the principal, whatever advantage or profit accrues from the transaction is for the benefit of the principal. A factor employed to sell cannot be a purchaser; nor if employed to purchase can he be a seller, unless by the express consent of his employer. A factor has a lien on the property of his principal or on his securities, as well for incidental charges, as for the balance due to him. —See AGENT, BROKER, COMMISSION, &c.

FAINTING, or **SYNCOPE**, as it is professionally called, very often attacks the individual without warning, though at other times, and in those subject to these distressing symptoms, fainting is preceded by well-defined sensations, such as a feeling of distress, languor, and sickness; the sight becomes dim, and the eyes appear covered by a film; an areola or dark circle appears round the orbits; a buzzing, or low singing noise, is heard in the ears; the face and lips are pale, a cold perspiration breaks out over the skin; the pulse sinks to a mere flutter, and finally ceases; the body totters, and unless upheld, falls to the ground. The loss of consciousness is sometimes complete; at others, the patient retains a partial amount of recollection; the pallor, too, is occasionally more intense, and corpse-like, the eyes shut, mouth open, the limbs flaccid, and the extremities deadly cold. This state lasts from five minutes to half an hour; a spasm of the chest and a few gasping sobs, each more prolonged than the last, is the first indication of returning consciousness. When the fit is prolonged, it may terminate in epilepsy or convulsions. The causes that predispose to faintings, are an intensely nervous state of the system, a delicate constitution, and extreme debility from whatever cause produced, or a diseased state of the heart. Youth is more subject than age, to fainting; and females more frequently affected by it than males.

Treatment.—When fainting is the result of excessive nervous sensibility, or when it occurs in hysterical women, there is seldom any danger; all that is generally necessary, is to lay the patient on his back in the horizontal position; loosen any string that may compress the chest or neck, open the window, dash water in the face, and apply volatile salts to the nostrils, and give a draught with half a teaspoonful of spirits of lavender, or thirty drops of sal volatile, and twenty of ether, added to the lavender and water, where the fainting threatens to merge in hysteria. Should the case be obstinate, heated bricks or mustard plasters must be applied to the feet or thighs. Where the fainting proceeds from organic disease, the treatment must be guided by the nature of the primary affection.—See Hysteria.

FAIR.—A greater sort of market instituted for the convenience of traffic, so that traders may be furnished with the commodities they want, at a particular spot, without the trouble and loss of time which must necessarily attend travelling from place to place: and as this is a matter of universal concern to the commonwealth, no person can claim a fair or market unless it be by grant from the crown, or by prescription which presumes such a grant. Fairs held without charter or prescription may be suppressed; but the owner or occupier of the ground may enter into recognizances to try the legality of the fair, and in that case no measures can be adopted for its suppression until the Court of Queen's Bench has negatived or affirmed its legal existence. All business and amusements at fairs in the neighbourhood of London must cease at eleven in the evening, and not re-commence earlier than the hour of six in the morning. Any house, shop, room, booth, standing, tent, caravan, or other place in the fair being open within the prohibited hours, subjects the owner to a penalty of £5; and any person present in such house, room, booth, &c., not removing therefrom, at the request of a constable, is liable to a penalty of forty shillings.

FALLOW.—Such land as has been repeatedly ploughed over, for the purpose of clearing it of weeds, and exposing it to the influence of the atmosphere. During a fallow a quantity of ammonia is collected from the atmosphere, potassa disengaged from its combinations, and other chemical effects produced, which have a beneficial influence on the future crops.

FARE, BILLS OF.—See **BREAKFAST, DINNER, SUPPER, &c.**

FARES, LOCOMOTIVE.—See **CAR, OMNIBUS, RAILWAY, STEAMBOAT, &c.**

FARM.—A portion of ground cultivated for the purpose of profit. There are different kinds of farms. Where the principal part of the land is under the plough, they are termed arable farms; but where the fattening of cattle or other live stock is more immediately the object, they are distinguished by the title of grazing farms; where the chief intention is the obtaining different animal products, such as milk, butter, and cheese, they are denominated dairy farms; and when the two systems of arable and grass management can be combined, they are called convertible farms. As manure must be had in order to render a farm of any kind productive, the last may probably be considered as the most advantageous. In addition to these, in districts where the hay is the principal produce, there are hay or grass farms, and there are also what are denominated breeding or cattle farms. Besides the healthfulness of the situation, then, other things should be particularly attended to in the choice of a farm; these are, the air, the water, and the soil. The air should be pure and temperate, the water wholesome and easily obtainable, and the soil fertile. In addition to these qualifications, the farm should be within a reasonable distance of good markets, both for the

sale of the produce, and the purchase of manure. The nature of the soil of a farm may be ascertained, by observation of the weeds which flourish upon it, and of the trees growing on the hedgerows. The elm and the oak are commonly tenants of good soils; the birch, the holly, and the ash, indicate those which are poor. And again, the productiveness of a soil may be estimated from the degrees of its attraction for the insensible moisture of the atmosphere; by the substratum on which it rests, and by its inclination. A person about to take a farm, should also closely examine the state of the buildings, the mode in which the farm has been cultivated, and the course of cropping which the outgoing tenant has followed. Books: *Johnson's Farmer's Encyclopedia*, 50s.; *Stephens's Book of the Farm*, 60s.; *Beasley's Account Book*, 15s.; *Rhan's Dictionary*, 5s.; *Grant's Journal*, 16s.; *Fletcher's Ledger*, 3s. 6d.; *Nash's Progressive Farmer*, 5s.; *Johnson's Almanack*, 2s.; *Grieve's Assistant*, 3s.; *Wilson's Dictionary*, 45s.; *Swinborne's Register*, 5s.; *Webb's Guide*, 3s. 6d.; *Knight's Library*, 17s. 6d.; *MacDermott's Ready Reckoner*, 5s.; *Main's Manual*, 6s.; *Neil's Scrap-Book*, 2s. 6d.; *Davis's Communications*, 5s.; *Doyle's Cottage*, 1s.; *Mayne's Dairy Cattle*, 3s.; *Bürger's Economy*, 3s. 6d.; *Murray's Farming for Ladies*, 8s.; *Doyle's Small Farms*, 1s.; *Passy's Small and Large*, 2s.; *O'Connor's Management*, 2s. 6d.

FARM BAILIFF.—A person occupying this position should have a tolerable education, be acquainted with accounts, measuring of work, land, and timber, and capable of drawing up agreements for hiring servants. He should have practised every part of farming himself, from tending poultry, swine, and sheep, to stacking and sowing. When employed by a gentleman, or one who has no skill in farming, he should not be under twenty-five years of age; but a farmer's bailiff need not exceed twenty-one years, is to be considered as a sort of apprentice, and will be directed in all leading matters by his master.

FASTING.—See **ABSTINENCE.**

FAT.—Fat is formed in the animal body by the separation of oxygen from the elements of the food, and whether it is the immediate result of decomposition of fibrin and albumen, the chief constituents of the blood, or by that of starch, sugar, or gum, it must be accompanied by the separation of oxygen from the elements of these compounds. Fat forming in the human body to an undue extent is a species of disease, entailing many inconveniences, and interfering materially with the general health: wherever a tendency in this direction evinces itself, a careful regimen and regular exercise should be had recourse to. Generally speaking, persons after they have reached the age of thirty-five, begin to "make fat," a change in the system probably owing to, among other causes, a decreased vigour of the digestive organs.

FAT, DIETETIC PROPERTIES OF.—A certain portion of fat is needed with animal food, to assimilate or assist the digesting of the leaner parts; thus with meats that have little or no fat, such as veal and fowl, bacon

or ham is almost universally considered a necessary adjunct. Eating fat to excess, however, is extremely injurious, as the oily matter into which it is converted after it has reached the stomach, interrupts the biliary functions, and not only occasions internal disorders, but frequently manifests itself in unsightly eruptions breaking out upon the face and various parts of the body.

FATIGUE.—See EXHAUSTION.

FEATHER BED.—Beds stuffed with feathers are in universal use in this country. The feathers are enclosed in a case of ticking. To prevent the feathers from coming through, which they are apt to do, the ticking is sometimes rubbed with beeswax in the inside, or with a mixture of heeswax and yellow soap. This is necessary when the ticking is thin; but it is better to have the ticking so close and stout as not to require it; and to prevent the feathers from penetrating, the ticking is occasionally made double. Feather beds, to be kept in good order, require to be well shaken every day, otherwise the feathers mat together in hard knots, that are difficult to undo and separate. When this has happened from long use or neglect, so that the beds are uncomfortable to those who sleep upon them, it is necessary to take the feathers out to have them dressed, and the ticking well washed, dried, and aired, if not renewed. The dressing of the feathers is usually performed by regular manufacturers, in which case it is necessary to take care that they do not keep back part of the feathers, which, in some cases, they are apt to do. The process may be performed by any one in a house where there is a spare empty room. The feathers should be emptied in a sheet, and carefully loosened by hand, picking out all the quill parts from the light feathers. The loosened or cleared feathers are then to be returned by handfuls into the new ticking, through a part of the seam left unclosed for the purpose. While this process is going on, the doors and windows of the room should be kept carefully closed, to prevent the feathers from flying about. As there will be some deficiency of bulk by this process, it would be as well to have a reserve stock in readiness to make good the abstracted portion. For this purpose, the feathers of poultry should be collected from time to time, put into strong brown paper bags, and well dried by keeping them several days in an oven after the usual baking processes have been performed. They should then be taken out, the quill parts cut carefully, and the feathers cleaned; then restored to the paper bags, and kept in a dry place for use. In purchasing feather-beds, the purchasers may choose their feathers, which are of various prices, at so much per pound; and they may see the ticking filled with them, having the quantity put in which they wish. If too much is put into the bed it will feel hard. As feathers are very expensive when bought new, it is more economical to await some favourable opportunity of purchasing them second-hand at a genuine sale of household fur-

niture; by this means they will not only be procured much cheaper, but if they have been moderately used, and carefully preserved, will be more advantageous to have than an entirely new bed.

FEATHER FLOWERS.—Procure the best white geese or swans' feathers, have them plucked off the bird carefully so as not to break the web, and free them from down, except a small quantity on the shaft of the feather. Having procured two good specimens of the flowers you wish to imitate, carefully pull off the petals of one, and with a piece of tissue paper, cut out the shape of each size, taking care to leave the shaft of the feather at least half an inch longer than the petal of the flower. Carefully bend the feather with the thumb and finger to the proper shape, being careful not to fracture the web. *To make the stem and heart of a flower,* take a piece of wire six inches long; across the top lay a small piece of cotton wool, turn the wire over it, and wind it round, until it is the size of the heart or centre of the flower being made. If a single flower, cover it with paste or velvet of the proper colour, and arrange the stamens round it; these are made of fine Indian silk, or feathers may be used for this purpose. After the petals have been attached, dip the silk or feather into gum, and then into the farina. Place the petals around, one at a time, and wind them on with Moravian cotton, No. 4; arrange them as nearly like the flower you have for a copy as possible. Cut the stems of the feathers evenly, and then make the calyx of feathers, cut like the pattern or natural flower. For small flowers, the calyx is made with paste. Cover the stems with paper or silk the same colour as the flowers; the paper must be cut in narrow strips about a quarter of an inch wide. *To make the paste of the calyx, heart, and buds of flowers,* mix common white starch with gum water until it is the consistence of treacle; colour it with the dyes used for the feathers, and keep it from the air. *To make the farina,* use common ground rice, mixed into a stiff paste with any dye; dry it before the fire, and when quite hard, pound it to a fine powder. The buds, leaves, and hearts of some double flowers are made with cotton wool, wound around wire, moulded into shape with the thumb and finger. Smooth it over with gum water, and when dry, cover the buds, leaves, or calyx with appropriately coloured pastes; they will require one or two coats, and may be shaded with a little paint, and then gummed and left to dry. Flowers of two or more shades or colours are variegated with water colours, mixed with lemon-juice; ultramarine and chrome, for blue and gold, may also be used in powder, mixed with lemon-juice and gum water. Feather flowers thus made prove an easy and inexpensive accomplishment, and yield pretty ornaments for the chimney-piece, chéffonier, &c.

FEATHERS, TO CLEAN.—Feathers may be cleaned of their animal oil as follows:—Take for every gallon of clean water one pound of quicklime, mix them well together, and

when the undissolved lime is precipitated in fine powder, pour off the clear lime water for use. Put the feathers to be cleaned into another tub, and add to them a portion of the clear lime water, sufficient to cover them about three inches when well immersed and stirred about therein. The feathers when thoroughly moistened will sink down, and should remain in the lime water three or four days, after which the foul liquor should be separated from them by laying them in a sieve. The feathers should be afterwards well washed in clean water, and dried upon nets, the meshes of which may be about the fineness of cabbage nets. The feathers must be from time to time shaken on the nets, and as they become dry they will fall through the meshes, and may then be collected for use. The admission of air will be serviceable in drying. The process will be completed in three weeks, and after being thus prepared the feathers will only require to be beaten to rid them of the dust. To clean *white, brown, or fawn-coloured feathers*, dissolve some fine white soap in boiling soft water, and add a small piece of pearlsh. When the water is just cool enough for the hand to bear it, pass the feathers several times through it, squeezing them gently with the hand. Repeat the same process with a weaker solution of soap, and then rinse the feathers in cold water, beating them across the hand to expel the water; when they are nearly dry, draw each fibre or flue over the edge of a small blunt knife, turning it round in the direction you wish the curl to take; then if the feather is to be flat, place it between the leaves of a book, to press it. *Black feathers* may be cleaned with water and some gall, proceeding as above.

FEATHERS, TO DYE.—Feathers may be dyed of various colours, as follows:—*Blue*, one ounce of oil of vitriol by measure, one drachm of the best indigo in powder, mix them well together, and let the mixture stand for a day or two; when wanted, shake it well, and put a tablespoonful of it into a quart of boiling water. Stir it well, put the feathers in, and let them simmer for a few minutes; then take them out and lay them by to dry. *Green*.—Mix the indigo liquid with turmeric, and pour boiling water over it; let the feathers simmer in the dye until they have attained the shade desired. *Lilac*.—Put two teaspoonfuls of cudbear into a quart of boiling water; let it simmer a few minutes before the feathers are put in. *Pink*.—Three good pink saucers in a quart of boiling water, with a small quantity of cream of tartar. If a deep colour be required, use four saucers. Let the feathers remain in the dye for several hours. *Scarlet*.—Into a quart of boiling water dissolve a teaspoonful of cream of tartar, put in a teaspoonful of prepared cochineal, and then a few drops of muriate of tin. *Yellow*.—Put a tablespoonful of the best turmeric into a quart of boiling water; when well mixed, put in the feathers. More or less of the turmeric will give them different shades, lighter or deeper, and a very small quantity of soda will give them an orange hue.

FEBRIFUGE.—A term applied to medicinal agents that mitigate and allay fever. They take the form of powders, pills, oils, salts, spirits, &c. The following is considered an excellent febrifuge powder:—One drachm of refined sugar and four grains of tartar emetic, intimately rubbed together in a mortar; to this is to be put two drachms of prepared chalk gradually added and rubbed in until the whole is thoroughly mixed. This powder is given in doses of from four to six or eight grains every three or four hours.—See **FEVER**.

FEBRUARY, GARDENING FOR.—*Kitchen Garden*:—*Artichokes*, defend in frosty weather. *Asparagus*, sow, plant, plant in hot-bed, attend to that in forcing. *Balm*, plant. *Beans*, plant, draw earth to advancing plants; transplant those raised under frames. *Beets*, sow, plant for seed, dig up and store any left in the bed. *Borecole*, sow. *Broccoli*, sow. *Cabbages*, plant and sow, plant for seed. *Cauliflowers*, attend to in frames, plant into border, sow, prick out. *Carrots*, sow; sow to draw young in a hot-bed, plant for seed. *Celery*, dress and earth up winter standing, sow in a hot-bed or warm border. *Chervil*, sow. *Clary*, sow. *Composts*, prepare and turn over. *Coriander*, sow. *Corn salad*, sow. *Cucumbers*, sow in hot-beds, prick and plant out, attend to those in forcing. *Dill*, sow. *Earthing up*, perform where necessary. *Endive*, blanch, transplant into frames. *Fennel*, sow or plant. *Garlic*, plant. *Horseradish*, plant. *Kidney beans*, sow in hot-bed. *Leeks*, sow, transplant for seed. *Lettuces* in frames, attend to and transplant; sow in a warm border or hot-bed, and in any open situation. *Liquorice*, plant, dig up three-year-old roots. *Melons*, attend to those in hot-beds, sow, prick out. *Mint*, force in hot-beds, make plantations. *Mushroom beds*, make, attend to those in production. *Mustard and cress*, sow. *Onions*, sow main crop, clear off weeds. *Parsley*, sow. *Parsnips*, sow main crop; dig up and store winter standing plants for seed. *Peas*, sow, hoe advancing, stock, when three inches high, attend to those in hot-beds. *Pennyroyal*, plant. *Potatoes* (early), plant in hot-beds and in borders. *Radishes*, sow in a hot-bed, attend to those in hot-beds, sow in open ground. *Rape*, sow. *Rhubarb*, sow. *Spinach*, sow, clear from weeds advancing crops. *Shalots*, plant. *Sorrels*, sow and plant. *Skirrets*, sow. *Savoy*, sow. *Sage*, plant. *Turnips*, sow. *Tansy*, plant. *Tarragon*, plant. *Thyme*, plant.

Flower Garden.—February is the first spring month, and the flowers will begin to give indications of life and gaiety. The anemones, hepaticas, &c., will now bud and flower if the weather is genial; and the crocus and snowdrop will begin to put forth their bloom. About the end of this month hardy annuals may be sown, including hawkweed, lavatera, Venus's looking-glass, caudytuft, larkspurs, lupins, convolvulus, flos Adonis, dwarf lychnis, uigella, annual sunflowers, &c. During this month all hardy fibrous-rooted flowering perennials and biennials may be planted and transplanted; such as saxifrage, gentianella, hepaticas, violets, primroses of all sorts, poly-

anthuses, double daisies, thirift, &c.; rose campons, rockets, campanulas, sweet-williams, hollyhocks, scarlet lychnis, carnations, plinks, monkshood, perennial asters, sunflowers and plant cuttings of roses, honeysuckles, and jasmynes. If the weather be mild, many kinds of evergreen shrubs may be transplanted, such as pilllyreas, laurels, laurustinus, pyracanthus, cistuses, &c. In transplanting let a bed of earth be retained round their roots; if box edging be required, it should be planted now. Dig the borders carefully and lightly with the garden fork; make the garden neat and free from weeds; clear away dead leaves; sweep the lawn and walks, and otherwise prepare for the advance of spring.

FEBRUARY, THINGS IN SEASON. —

Fish—Carp, cod, eels, gurnet, oysters, perch, plaice, skate, smelt, soles, tench, turbot, whiting.

Fruit—Apples, grapes, pears.

Meat—Beef, house lamh, mutton, pork, veal.

Poultry and Game—Fowls, bares, partridges, pheasants, rabbits, snipes, turkeys, widgeons, woodcocks.

Vegetables—Brocoli, carrots, celery, endive, onions, parsley, potatoes, savoys, sprouts, turnips.

FEEDING BOTTLE.—A substitute for the breast, by which sustenance is administered to infants. The bottles are made of a convenient form, having in the centre an aperture through which the food is poured, while at the mouth of the bottle the teat is fastened on for the infant to suck from. The best kind of teat is that made of calf's teat, and usually sold at surgeons; others are made of caoutchouc, but these are not to be recommended, as their hard surface frequently irritates the gums of the infant and prevents him from sucking; the calf's teat is decidedly the best, being soft and pleasant, and more nearly resembling the human breast than any other. Great care, however, is necessary in using them, as they soon turn sour; immediately, therefore, the child is fed, the teat should be thrown into a tumbler about half full of cold water, with a wineglassful of gin in it, this will counteract any tendency to acidity, and the teat should remain in the glass until it is again required; after a time it becomes very hard and tough, and should then be exchanged for a new one. The bottle itself should be attended to with the most scrupulous attention; it should be rinsed out every time it has been fed from, and the food should not be suffered to remain in it and again offered to the child. If these matters are neglected, the infant's stomach, by being subjected to the same food, becomes deranged, and his whole system disordered from a mere act of inattention and carelessness. In using the bottle it should be slightly elevated in the direction of the infant's mouth, and the hole in the centre of the bottle should be partially covered with a cork, in such a manner that the infant may not suck in the wind, and yet not to render it air-tight, and so preventing him obtaining any food. The teat also

should be from time to time examined, as the orifice through which the food is sucked is apt to get larger, and admit too great a quantity of food passing at a time, or sometimes it becomes clogged up and resists all efforts made to obtain food from it. These bottles, by their shape, are very well adapted for being placed upon the pillow at night. For this purpose warm food should be poured into them just previously to retiring to rest, both openings corked up, and the bottle rolled up in flannel and placed under the pillow or in the bed; the teat should also be placed by the bedside in its accustomed tumbler, so that when the infant awakes and requires food, the cork has only to be taken out, the teat fastened on, and the child is at once supplied with warm food.

FEEDING CATTLE.—Food ought to be given to cattle at stated times, in such quantities as to satisfy but not to glut the animals, and varied in quality, so as to keep the appetite alive. Water should be regularly supplied according to the kind of food, the state of the animal, and the season of the year. Cattle that are fed in part on green food or roots, will require less drink than those fed on hay, straw, or corn; and cattle that have been at work and perspire, will require more water than such as have been idle or at pasture. In summer, cattle fed on dry food obviously require more water than in winter, owing to the increased perspiration.

FEES, MEDICAL.—There is in this country no legal scale of remuneration for medical men of any grade. The physician, by the spirit of his degree, is prohibited from making *any* charge whatever for time or services, and consequently could not recover by law any sum for professional advice that he might consider due to him. The understood fee in this country, for one visit of a physician, ranges from one to five guineas, according to the rank of the patient and the professional eminence of the doctor; though the average may be struck, as *two* guineas for the first, and *one* for all subsequent visits for the one illness. Many physicians, whose ratio is known to be never less than two guineas, give some consultations, at certain hours in the morning, where all convalescent patients obtain advice for *half a guinea*; but whatever a physician may report to be the amount of his fee, no one would refuse a guinea if offered, unless he did so from motives of charity. As respects operative surgeons, the scale of remuneration for minor or capital operations, is equally vague and indefinite. General practitioners have a very doubtful legal right to charge, and though modern usage has established a precedent to make their power so far safe, the amount they may charge for medicine and attendance is entirely a matter of choice. A six-ounce mixture is generally allowed from 2s. 6d. to 3s.; a dose of two pills 6d., a larger number 1s.; draughts from 1s. to 1s. 3d. each; and lotions from 2s. to 3s. 6d. a pint. When at this ratio medicine to the amount of 6s. or 7s. a day has been sent to the patient, unless his circumstances should

be affluent, no jury will allow a separate item for professional attendance—a very common practice is to charge at the rate of 2s. 6d. or 3s. 6d. a visit; if, however, the invalid lives beyond a mile from his doctor's house, he is allowed to charge the visit as a journey, at 1s. For being called up in the night the customary fee is 5s., and this also, with the mileage, a jury would allow. The only exception is in the case where the state of the patient demanded frequent visits in the day, when, if without medicine, the attendant might charge every such professional interview at 2s. 6d. The fee usually charged by a general practitioner for reducing a dislocation, or setting a simple fracture, is the same, and varies from half a guinea to two guineas; and this, unless a fracture of the thigh, which requires frequent watching, and readjustment of splints, should include every demand, till the patient is cured. For compound fractures, the fee would depend upon the amount of mischief done, and of course the means of the sufferer. For minor operations, of bleeding, tooth-drawing, and cupping, the two first are charged from 1s. to 2s. 6d., unless the medical man is sent for to perform either, when the amount would be doubled; while for cupping the fee always ranges from 7s. 6d. to one guinea.

FEET.—To preserve the feet in a proper condition, they should be frequently soaked and well washed in warm or tepid water. Many persons are subject to tender feet. This frequently arises from the use of thin cotton or silk socks or stockings, and boots and shoes that are either too tight or stiff, or not sufficiently porous to allow of the escape of perspiration. Waterproof boots and shoes are on this account frequently the cause of tender feet. The best remedy for tender feet is the immediate adoption of worsted stockings or socks, and light easy shoes of buckskin, goatskin, or some other equally soft kind of leather. For the preservation of health, it is highly necessary to preserve the feet dry; persons who are therefore exposed to the wet, or who have much walking in wet weather, should be particular in wearing sound boots and shoes; through neglecting this precaution, many persons have brought on pulmonary complaints, which have frequently had a fatal termination. Coldness and numbness of the feet is a complaint to which some persons are subject, especially aged and delicate persons, and those whose employment is sedentary. The best and most natural remedy for this, is action, exercise, or friction—the former being always adopted when possible. Retiring to rest with cold feet is especially to be avoided, and persons so subject, should pace up and down the room just previously to going to bed, until their feet have attained a warm glow. Where this is impracticable, owing to weakness, old age, &c., warm woollen stockings may be put on with great advantage, or the hot water bottle had recourse to. The peculiarly disagreeable odour emitted by offensive feet, may be remedied chiefly by scrupulous attention to cleanliness, and by occasionally soaking the feet in warm water to which a

small quantity of chloride of lime or sal ammoniac has been added.—See **BOOTS, BUNIONS, CHILBLAINS, CORNS, SHOES, SOCKS, STOCKINGS, &c.**

FELLING TREES.—The art of cutting down trees for the purpose of timber. The season for conducting this operation depends upon the quantity and the value of the soft or outer wood of the trunk of the tree to be felled, known by foresters and carpenters as the sap-wood. As this sap or outer wood is the only portion of the trunk in which the sap or juices of the tree flow, it is evident that if no value be set upon it, the tree may be cut down at any season; because the truly valuable part of the trunk, the mature timber, is impermeable to the sap in its ascent through the soft wood, and is therefore in the same state at every season of the year. On the other hand, when much value is attached to the soft or outer wood, where the wood is to be made as valuable as possible, or where, as in the case of comparatively young trees, the greater part of the trunk consists of sap-wood, felling ought to take place when there is least sap in the course of ascending. This season is, without doubt, midwinter; the next best is midsummer, when the sap is chiefly confined to the young shoots, the circumference of the soft wood, and the bark. The worst time for felling timber is the spring, just before the development of the buds, when the tree is fullest of sap, and receiving constantly fresh supplies from the root; and in autumn, immediately before the fall of the leaf, when there is a superabundance of sap, from its being, as it were, thrown out of employment by the falling of the leaf. In general, all the soft woods, such as the elm, lime, poplar, willow, &c., should be felled during winter; hard woods, like the oak, beech, ash, &c., when the trunks are of large size, and valued chiefly for their heart wood, may be felled at any time. When the bark, however, is taken into consideration, as in the oak, the tree should be felled in spring, as then the bark contains four times the quantity of astringent matter to that felled in winter.

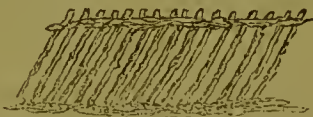
FELT.—A material formed of fur or wool alone, or of a mixture of these substances with camel's hair, which are blended into a compact texture, used principally in the manufacture of hats. Hare and rabbit fur, wool and beaver, are the chief materials used; they are mixed in proper proportions, and tossed about by the strokes of a vibrating string or bow, till they become duly matted together. Felt strongly compressed is now used as cloth. It has one advantage over woven cloth, it does not become threadbare by use.

FENCE.—In rural economy any kind of erection made for the purpose of enclosing ground, or a hedge, wall, ditch, bank, paling, or any continuous line of obstacle interposed between one portion of the surface of land and another, for the purpose of separation and exclusion. Of these constructions there are various kinds, according to the uses to which they are put. *The willow or wattled fence (fig. 1.)* is made by driving a number of poles

of any of the kinds of willow or poplar, about half the thickness of a man's wrist, into the earth in the direction of the fence, and at the distance of about eighteen inches from each other. They are then twisted or



bound together along the top with small twigs of willow or poplar. This kind of fence has some advantages peculiar to itself; it not only forms a cheap and neat paling, but if it be done either about the end of autumn or early in the spring, with willows or poplars recently cut down, the upright parts or stakes will take root, grow, and send out a number of lateral branches; and if pains are taken in the following autumn to twist and interweave these branches properly, a permanent and almost impenetrable fence may be formed in two or three years. For the enclosing of marshy lands or completing any enclosure, where a part of the line in which the fence ought to run is so wet as to be unfit for the growth of thorns or the building of a wall, the willow paling will be found an excellent contrivance, and the use of it will render many enclosures complete that could not otherwise have been formed. Sometimes stakes are used of a kind which do not take root and grow, in which case this form still makes a



neat and very efficient temporary fence. (fig. 2.) The light open fence, with thorns or the branches of trees wove in, is made by



stakes being warped, as seen in fig. 3. When properly executed, it forms at once a very complete fence; but, like all fences made with dead wood, it will be found very penetrable, and will require many repairs. It has, however, one advantage, namely, that when properly executed, it is proof against the entrance of animals of any kind. Primitive fences are formed without nails or fastenings of any sort, by inserting the pales or stakes in the ground in different directions, (fig. 4.) and by using forked or hooked stakes. They are chiefly desirable in forest or park scenery for maintaining a particular character, and for separating horses, deer, &c.

Park fences of iron are the most efficient and elegant. Light cast-iron posts with rails or round iron rods five-eighths of an inch in diameter to the height of four feet, and a foot higher, on the bent extremity of the posts, a chain instead of a rod, are found to form an effectual barrier against any description of cattle. Similarly characterized fences may be composed of connected



hurdles, which are valuable, and probably the cheapest of all fences in dividing rich and extensive pastures. For poultry, or for excluding hares, rabbits, &c., the lower part of such fences is covered with a wire netting (fig. 4). Wall fences are constructed of different sorts of materials and are of various kinds. They are for the most part good fences, though some of them, as those of the earthy kinds, are not by any means durable, and therefore should not be formed where better sorts can be used. — See HURDLE, PALING, &c.

FENCING.—In the practice of this art one of the most essential considerations is the command of the body, which is to be exercised in the three following positions:—The first is the well-known position of a soldier standing on parade, erect, with his heels close, upon a small base. This is, of itself, a weak attitude, and unfit for defence; the fencer, therefore, is to spring from this into the second position, which is well adapted to defence and attack (fig. 1). In



this position the knees are bent, the more the better, as the force of the elastic spring will be in proportion to the contraction of the muscles; the body is balanced on the legs so that it may rest on both or upon one, and more particularly upon the hinder leg. Thus, instead of standing square to the front, as in the first position, and presenting the greater diameter of the person, the side only

is presented, which will be covered by the weapon, and the arm directed in a line before it. The sword is to be grasped by all the fingers, and the thumb extended along the gripe. As the knees are bent, so must the arm be contracted at the elbow. In the second position you sink your knees and have all your powers restrained and ready for action; the exertion of these powers will place you in the third position, with your feet about three feet asunder, at right angles. This attitude is termed the *allonge*. The *allonge* is to be made with all possible rapidity: this will be better accomplished by impressing the ideas of it upon the mind one after the other. Thus, first form your extension (*fig. 3*); elevate your right hand



as high as the direction of your left eyebrow; lower your point in a line with the cavity under the arm of your adversary; extend your left hand and left knee; then project the thrust, throw forward your right foot at the same instant, fifteen or sixteen inches, so that your feet may be about thirty-six inches asunder (*fig. 4*). The foot



should resound in striking the ground. Repeat this practice until you can execute it in one rapid motion. Examine your attitude in this third position, and practise unremittingly in the air, until you acquire a graceful precision in the execution. In cutting, the hand is to be in the most natural position, between supination and pronation; but it is to be turned into complete supination when you end your cut in a thrust.

The best mode of parrying this cut is by the *pointe volante*; that is, by contracting the arm, and opposing the foot of the weapon, which must be raised perpendicularly to extricate the foible (*figs. 5 and 6*). The terms



fort and *foible* are relative, and so used to mark the different forces of the different parts of the hand-weapon. That part of the weapon held by the hand is the *fort*; the powers of the other parts of the weapon vary in proportion to their nearness to, or distance from *fort*. The guard, cut and thrust of tierce, are formed by turning the fore-arm, wrist and hand into pronation. The hand has also to describe an arc of about eight inches from the guard of quatre to that of tierce, from the left to the right. The delivery of the thrust and cut in tierce, is similar in principle to that of quatre, in justly applying your *fort*. The formation of the extension and the *allonge* are the same in all thrusts; but the opposition in tierce and in quatre over the arm, is to your right. Feel your adversary's blade constantly, but do not press it, as you will be exposed to his tierce-thrust by relinquishing the point of contact. Roll your hand into pronation as you project the thrust along his blade. Oppose your hand high, and over his blade, to your right. Direct your point into the cavity under his arm. The *glissade* is a sliding movement along the adversary's blade, intended to draw him from the line, and to expose him to a thrust or cut. The *glissade* is dangerous, as your adversary may hit you on the first movement by his simple thrust, having two to one in his favour. The *flanconnade* is a thrust directed to the lateral part of the stomach: make use of it as a return from your round parade of quatre, by pressing down your adversary's point with your *fort*; the resistance of his point will assist the direction of your *flanconnade*.

Disarming.—The dexterous combination of the round parades will enable you frequently to disarm your adversary. The weakness of the hand in pronation is evident. This weakness is still more manifest in the guards, termed the hanging guard, the protects, and the inside and outside half-hangers. No aid from the sword-knot can

prevent the fingers from opening and yielding to any impulse in the vertical direction, when the sword is held in these positions. But even a tolerable swordsman may be disarmed under the following circumstances:—1. If he change from tierce to push quatre, cross his foible from your left towards your right, in the direction of the opening of his fingers, direct your point in the line towards his right eye, alonge, and you will both hit and disarm him. 2. If he cuts over your point, or pushes quatre-over, use your round parade of quatre, instantly rolling your hand into pronation; direct your point in the line as before. 3. Parry any assault made over your arm with the pointe volante in tierce, hurl down the vertical cut, end it in a thrust, opposing your hand well in quatre, and he will be cut, hit, and disarmed. 4. If he push prime, seconde, or quinte, &c., his hand is ready prepared to be disarmed by the slightest impulse of your weapon in quatre, touching his foible. Be careful to disarm in the line, that you may not be exposed, in the event of your not succeeding in your plan. 5. If he push or cut under your arm, rotate your hand, describing the half-circle three or four times in continuation; adhere closely to his blade, and he may be thus disarmed. 6. The following mode of disarming is safe and certain:—Parry your adversary's quatre-over with your round parade of quatre, and before his fort strikes the ground, depress his foible, and adhere to it with your fort; seize the fort of his sword with your left hand, and he will be instantly disarmed: but none of these modes of disarming should be attempted before you feel yourself completely dexterous in the preceding operations. Books: *Rolando's Introductory Course*; *Gribble's Treatise*; *Walker's Defensive Exercises*.

FENDER.—An article of furniture belonging to the fire-place. In construction the fender should be low and narrow, for the lower and narrower it is, the more heat will be radiated from it into the room. The front of the fender, unless very low indeed, ought always to be of open work, in order to admit through it the radiation from the fire. The forms and lines, and general style of the fender, ought to be the same as those of the grate, and both should harmonize with the chimney-piece. The best and most elegant fenders are made of polished steel, enriched with brass or bronze, to correspond with the style of the grate, and many are made of cast iron, very highly ornamented and decorated. The cheapest fenders are made of tin plate and wire painted, and brass or iron tops and bottoms; and these are best adapted for bedrooms. A more durable kind are cut out of sheet iron and painted in imitation of iron wire. Fenders may be rendered the receptacles and economizers of fuel, by having a well-hole inside for containing fuel; thus serving instead of a coal-scuttle, and at the same time drying the fuel so as to diminish the quantity of smoke produced. In this case the fender and its well may be fitted into a sunk place in the hearth; the coals will thus be always at hand, and burn readily when put on the fire.

FENNEL.—A perennial plant naturalized in England, and found in chalky soils. There are several varieties, all of which are raised from seed, half an ounce of which is sufficient for a seed-bed four feet by six feet; sometimes, also, they are raised from offsets from the old plants, where only a few are wanted. It should be sown in the spring in light earth, either in drills from six to twelve inches apart, or broadcast, and raked in. When the plants are three or four inches in height, they should be thinned or transplanted fifteen inches asunder. As the roots of old plants divide into side offsets, these may be slipped off in spring, summer or autumn, and planted one foot apart. They will produce immediate leaves for present supply, and in continuance; or for an immediate larger supply of leaves, established full roots should be procured, planted as above, and well watered. The same plants remain several years by the root, but as fennel sends up showy stems for seed in summer, these, or a part of them, should be cut down to encourage the production of young leaves below, in succession.

FENNEL PICKLED.—Put into boiling spring water, bunches of fennel tied; add salt, simmer it until it attains a bright green colour, when take it out and dry it on a cloth; when it is cold, put it into jars with nutmeg and mace, fill it with cold vinegar, and put a sprig of green fennel on the top; cover the jars with bladder, and put by in a dry place.

FENNEL, PROPERTIES AND USES OF.—The leaves and seeds of this plant are used in the form of infusion as a remedy for flatulence, and to assist digestion. For culinary purposes it is employed in sauces to be eaten with fish, particularly mackerel and salmon, and is sometimes used as a salad and a pickle. Its peculiar flavour, however, renders it distasteful to many palates.

FENNEL SAUCE.—Take as many sprigs of green fennel as may be required; pick and wash it clean, chop it very small, scald, and then lay it in a sieve to cool; put two tablespoonfuls of stock, and two ounces of butter into a saucepan, make them quite hot; take care to stir it well, that they may be properly mixed; rub the fennel in a little butter, and then throw it into the sauce; mix it thoroughly, and season it with pepper and salt.

FERMENTATION.—The spontaneous decomposition of the proximate principles of organic substances, under the joint influence of warmth, air and moisture, and the reunion of their elements, forming new compounds.—See BLEAD, BREWING, YEAST, &c.

FERNS.—A species of plant partaking of the character of heatis. *Hardy ferns*, if producing side-shoots, may be increased by division. If they are planted out in a bed or on rock-work, they should be taken up and divided into pieces, with a portion of earth to each. They may be replanted; but a better method is to pot them, and place them in a cold frame kept close and shaded till they make fresh roots and fronds.

Scarce kinds may be increased by seed. If some small sandstones be placed in a damp shady situation, and the fern seed be scattered upon them, and then be covered with a hand glass, the seeds will germinate, and the stoues will be covered with ferus. For the rarer kinds a little extra care will be necessary. Sow them on rough pieces of dead turf, place them under a hand-glass, in a situation where they can have a close, warm, moist atmosphere; a cold frame, kept close in summer, will answer admirably. *Stone ferns*, or any kind of fern that sends out creeping stems underground, rapidly increases by division. This requires considerable care. They should not be divided till the parts to be separated have a portion of roots to each. Turn the plants out of the pots, and with a sharp knife, divide the plants into as many parts as have roots and a small ball; pot them in pots only a little larger than the little ball; drain them well, give a gentle watering, and place them in a shady situation till they begin to grow again, and send up fresh fronds. Ferns may also be propagated by seed. For this culture they require a constantly humid, warm atmosphere, and little, if any sunshine. Procure a wide earthen pan, a hand or bell-glass that will fit within it and rest on the bottom, and a shallow wide pot that will stand within the glass and above the rim of the pan two or three inches. Fill this pot half full of potsherds and upon them a sufficient number of small pieces of turfy peat, mixed with small pieces of sandstone about the size of peas, to come up to the pot. Then take the frond of any fern that is full of seed, and with the hand, brush them off upon the prepared pot set in the pan; place the glass over the pot, and fill the pan nearly with water. Place the whole in the warmest part of the stove, shading it from the sun. The small pieces of turf and stone can be easily separated, and the seedlings on each put into small pots, without any danger of destroying them by the process of potting. *Greenhouse ferns* may be cultivated by the same method, and with the same compost. The only difference is in the temperature. In summer they may be set out of doors with the rest of the greenhouse plants, and brought into it as soon as there is any danger of frost. The great advantage of growing ferns in a greenhouse is that they fill up many corners where nothing else will grow.

FERRET.—An animal of the weasel and polecat kind, distinguished by its red fiery eyes. It has a natural aversion to rats and rabbits, and when either are presented the

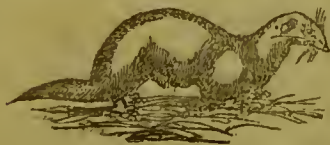
its victim, and instantly fall into a profound sleep, from which it will awaken only to the work of destruction, committing in the warren, where it was introduced only for its services, the most dreadful havoc. The ferret hutch should be large and roomy; the bottom made sloping, so as to drain off the wet, and a large square of wire work in front. The inside should be fitted with a raised platform for sleeping purposes. A bed of hay in winter, wheat straw in summer, is the best. This bed, in ordinary times, should be changed thrice a week; when the young ones have the distemper, as often as twice a day. Their ordinary food should be new milk and wheaten bread, with occasional birds, flesh, &c.; when in the distemper milk and bread alone. Should this plan be followed out, no outward application whatever is necessary.

FEVER is the result of a diseased or impaired action of the system, and though sometimes attending or following certain diseases as a symptom or consequence, most frequently falls on the constitution as a substantive disease, either developing its characteristic symptoms, as the disease advances, or following the slow maturity of a chain of morbid actions. Fevers may, in the first instance, be divided into those which proceed from some indirect or secondary cause, and those that arise from contagion, or causes the direct precursors of fever, having a definite rise, an understood progress, and a well ascertained termination. In the first named class of fevers, are comprised those febrile symptoms that appear during or after some organic disease, accidents, surgical operations, or other causes of physical suffering.

The second, or spontaneous class, is divided into two chief heads—nervous and inflammatory fevers: under nervous fevers are classed typhus, intermittent, continued, and remittent fevers; and under that of inflammatory fevers, first, all eruptive fevers, as scarlet fever, small pox; and, secondly, the fevers attending all inflammatory actions of organs or viscera, such as inflammation of the liver and bowels.

The general characteristics of fever are cold chills, lassitude, headache, loss of appetite, thirst and nausea, with a moist inred tongue, or else a tongue dry and coated, pain in the back and loins, succeeded by cold shiverings, which gradually give place to heat, diffusing itself over the body and becoming permanent; ringing in the ears, intolerance of light and cold extremities; the pulse is either small and quick, or full and hard. Special fevers, and constitutional temperaments, very much magnify, or even mitigate these symptoms; still those given are the ordinary characteristics and sufficient to indicate the presence of fever to the least accustomed eye.

The treatment, on the same broad principle, resolves itself into relieving the congested organs, breaking the chain of morbid actions on which fever depends, equalizing the circulation, and lastly, by the adoption of a course of medicinal agents, correcting the vitiated state of the secretions, and re-



ferret seizes and bites them with uncontrollable savageness. When employed to expel the rabbit from its burrows it must be muzzled, as otherwise it will suck the blood of

storing the functions to a healthy performance of their several duties. To effect the first it is often found necessary to bleed, or else by leeches, cupping, or blisters, relieve the overloaded organs; the second object is generally effected by an emetic, which in some instances it becomes necessary to repeat. The warm, the hot, or the shower bath, or aspersions of cold vinegar and water, are the means employed to effect an equalization of the circulation and restore blood and warmth to the surface. The therapeutic means to be employed during the career of a fever, must depend entirely upon the character of the disease to be treated, and will be entered upon more particularly under their several heads.

A remarkable peculiarity belonging to all fevers, is a periodicity of the disease, or a property that all fevers have of arranging their effects into periods of regular sections; as, first, into fits and paroxysms, then into remissions, and finally into critical days. Most fevers have three stages, called the *cold*, *hot*, and *sweating*; in some, these divisions are perfect and distinct, in others, broken and imperfect; these fits following in regular order, comprise a paroxysm, which may return at certain hours or only at irregular periods.

The critical days are regarded as the 3, 5, 7, 9, 11, 14, 17, and 20, and the non-critical days are the intervening ones.


The ages at which persons are most liable to fever, are from 20 to 30, and in the following order, gradually declining from 30 to 40, 40 to 50, and 50 to 60. As respects sex, females are more subject to fever than males, but only in a small degree. All fevers are not infectious, but those that are so are communicated by contact, exposure to the atmosphere surrounding a fever patient, and whatever depresses the mind or weakens the body, predisposes the system to infection. The best preventative against the worst form of fever, is cleanliness, a cheerful disposition, and an active body.

FIBRIN.—This term is applied to a peculiar compound organic substance, existing both in animals and vegetables, and is eminently nutritious. It is of a whitish colour, without taste or smell, tough and elastic, but when dried, hard and almost brittle. It is not soluble in water or alcohol, and the concentrated alkalies form with it a kind of fluid viscid soap. It is dissolved even by the weak and diluted acids, but it undergoes some change by which it acquires the properties of jellying and of being soluble in hot water. By maceration in water it becomes putrid; by long boiling in water it is rendered tough and corneous, and when decomposed by heat or nitric acid, it is found to contain a large proportion of nitrogen. It forms the basis of muscular fibre, and is contained in the crassamentum of the blood, and does not seem to differ in any important property from the gluten of wheat. It will be thus seen, that on this property predominating either in animal or vegetable substances, will their value in a great measure as an article of diet be determined.

FIERI FACIAS.—A judicial writ, when judgment is obtained for debt or damage, by which the sheriff is commanded to levy the same on the goods and chattels of the defendant.

FIG, CULTURE OF.—This tree may be propagated by cuttings chosen in autumn from the best ripened wood of the same season's growth, selecting those that are from eight to ten inches in length; retaining about an inch of the older wood at the base, and planting them at once in light sandy soil without taking off their tops. They should be planted in pots, and these plunged in a dry warm sheltered place, and protected from frost during winter. In spring they should be placed in a more open and airy situation, and by the autumn following they will be fit for shifting into larger pots, or, if upon a large scale, into nursery rows. The young plants require little pruning, only training them to one stem to the height of a foot—if for dwarf standards. If the trees are intended for training against walls or espaliers, training for the first and second year is necessary. If properly attended to, figs from cuttings will begin to produce fruit the second and third year. Figs propagated by suckers are apt to send up suckers ever after, and, besides this, they seldom make such short-jointed well-formed wood as those originated from cuttings. The fig may also be struck from single eyes, by which mode it is probable that better and shorter-jointed wood might be produced.

FIG PUDDING.—Take three-quarters of a pound of grated bread, half a pound of figs, six ounces of suet, six ounces of moist sugar, a teacupful of milk, and a little grated nutmeg. Chop the figs and suet very fine. Mix the bread and suet first, then the figs, sugar, and nutmeg, one egg beaten well, and lastly, the milk. Boil in a mould for four hours. Serve with sweet sauce.

 Bread grated, $\frac{3}{4}$ lb.; figs, $\frac{1}{2}$ lb.; suet, 6ozs.; sugar, 6ozs.; milk, 1 teacupful; egg, 1; nutmeg, to flavour.

FIGS PRESERVED.—Allow an equal weight of loaf sugar and of small green figs; wipe them, and cut them across the top; lay them into a strong brine of salt and water for ten days. Boil them in water till the head of a pin will easily pierce them, and then lay them into cold water for four days, changing it daily. Clarify the sugar, and put in the figs while hot; beat them in the syrup three times, and the last time boil them till they look green and clear.

FIGS STEWED.—Put into an enamelled or copper stewpan, four ounces of refined sugar, the very thin rind of a large fresh lemon, and a pint of cold water. When the sugar is dissolved add a pound of Turkey figs, and place the stewpan over a moderate fire, where they may heat and swell slowly, and be very gently stewed for two hours or two hours and a half. When they are quite tender add to them two glassfuls of port wine and the strained juice of the lemon, arrange them in a glass dish and serve them cold.


 Sugar, 4ozs.; lemon, 1 rind; water, 1 pint; figs, 1 lb.; port wine, 2 wineglassfuls; lemon, juice of 1.

FIGURE.—See CALISTHENICS, CORSET, DEPARTMENT, &c.

FILBERT.—A nut derived from the cultivation of the common hazel. New and improved varieties can only be obtained from seed, and therefore nuts of the most approved varieties should be sown in October or November on light rich soil, covering them to the depth of two inches. Care must be taken that rats and mice be prevented from attacking them, by rubbing the nuts at sowing with arsenic, mixed with tallow or lard. When the plants are one year old, transplant into nursery lines about two feet apart, and one foot plant from plant in the line. Stock, however, may be better procured from suckers than from layers, the former producing trees upon a single stem, which is important. Seedlings or suckers afford excellent stocks for grafting approved and esteemed sorts upon, but these must be trained to single stems. Where ground is not to spare in gardens, the filbert may be successfully grown along the sides of plantations, and in sunny places in open woods and copses.

FILBERT BISCUIT.—Take half a pound of blanched filberts, one ounce of blanched bitter almonds, the white of six eggs and the yolks of three, one ounce of flour, and half a pound of loaf sugar; pound the filberts and almonds, adding a little white of egg from time to time, to prevent their turning to oil; whip up the remainder of the white of egg into a froth, and mix with them the yolks previously beaten up, with half the sugar; then add the flour through a sieve, and after that the remainder of the sugar; mix this with the filberts and almonds thoroughly; fill little cases made of writing paper, about four inches long and half an inch high, leaving them open at the top. Bake in a moderate oven.

Filberts blanched, $\frac{1}{2}$ lb.; bitter almonds blanched, 1 oz.; eggs, 6 whites, 3 yolks; flour, 1 oz.; sugar, $\frac{1}{2}$ lb.

FILBERTS, TO PRESERVE.—The nut should be gathered when its cup or covering turns brown, and when they begin to drop of their own accord. When gathered with the husks attached to them, they may be laid on the shelves of the fruit-room like any other fruit, and will thus keep good till Christmas. For later keeping, remove the husky covering, and pack the nuts in boxes containing dry sand, which will exclude the air and prevent the kernels from shrivelling; in a cool place they will keep thus for a year or more.

FILE.—When the edge of this implement becomes dull from age, dirt, or being much worn, it may be greatly improved by immersing it in water for a day or two.

FILLY.—The new-born one is called a foal, the male being a *colt foal*, and the female a *filly foal*. After being weaned, the foals are simply called *colt* or *filly*, according to the sex. For the breaking in of fillies, see **COLT-BREAKING AND HORSE-TAMING**.

FILTER.—A utensil through which water is made to pass, for the purpose of retaining its impurities, and preventing them from mingling with the fluid when employed for drinking or other purposes. The impurities which the Thames and other river-waters contain, render a filter not only an article of great domestic utility, but almost a necessity. From the very nature of their office, filters require to be kept scrupulously clean, and the water when used for drinking should be put in fresh daily.

Filters should be kept in a cool shady situation, and in some place where they are not liable to be disturbed. Filters for delicate purposes are made of white unsized paper, and they are folded up, so as to form a cone; to support this, the paper, so folded, is put into a funnel, and this funnel into a filtering stand. These filters can only serve once. When large quantities are to be filtered, bags made of flannel or linen, and fastened to a hoop, are used. Where no great nicety is required, a wooden frame supporting a cloth, and placed over a tub or pan, is sufficient.

A substitute for the ordinary filter may be constructed as follows:—Put into an earthen vessel (such as bakers use to form the loaves in, with a small hole at the bottom or pointed end) some pieces of sponge, and on them a sufficient number of small clean pebbles to quarter-fill the vessel. Hang this filter, end downward, in a barrel with the head up, leaving a space of about two or three inches between the end of the filter and the bottom of the barrel. The upper part of the filter should be kept a little above the top of the barrel, which must always be kept full of water. The sediment of the water will remain at the bottom of the barrel, and the pure water will rise through the sponge and pebbles to the vacant part of the filter. It may be hung in a cistern or water-butt, if more convenient. The pebbles and sponge should be cleaned occasionally. Another economical filter may be made by taking out the head of a cask, setting it upright, and at a distance of about one-third from the bottom putting on a shelf or partition pierced with small holes; this shelf being covered with pebbles, upon which is a layer of fresh charcoal made from bones; and over this lay fine sand, to the depth of an inch, covered with another layer of pebbles; and upon this should be placed another shelf, pierced with holes, to prevent the pebbles, sand, and charcoal being disturbed by the water which is poured or runs in at the top of the cask; and after passing through the filter, is drawn off by a crane, placed at the bottom of the cask.

FINDING.—The law of finding, after much discordant decision has been lately determined as follows:—1. If a man find goods that have been actually lost, or are reasonably supposed by him to have been lost, and



appropriates them with intent to take the entire property of them, really believing when he takes them that the owner cannot be found, it is not theft. 2. But if he takes them with the like intent, though lost, or reasonably supposed to be lost, but reasonably believing that the owner can be found, it is larceny.

FINGER GLASSES.—Glasses filled with rose or orange-water, slightly warmed in winter, or iced in summer, and handed round amongst the guests at a dinner-party when the repast is finished. The use of them demands some little delicacy; the tips of the fingers only should be immersed, or the corner of the table-napkin slightly wetted and applied to the fingers. The practice of gargling the mouth out on such occasions, though sometimes tolerated, is both indelicate and offensive.

FINING.—An operation by which thick and cloudy liquors are made to look bright and clear. *Beer finings* may be made and used as follows:—Isinglass (finely shred), one pound; some beer, cider, or vinegar, three or four pints, macerate these together; add more of the sour liquor as the isinglass swells, until about a gallon has been used; agitate with a whisk or small bundle of twigs, to promote the solution. When the whole of the isinglass is dissolved, reduce the mixture to the consistency of thin syrup, with weak, mild beer, or cider. Then strain the whole through a tammy cloth or hair sieve, and reduce the mixture to a proper state of dilution by adding more liquor. A pint or a pint and a half is sufficient for a barrel of ale or porter. *Spirits may be fined* as follows: supposing the quantity to be fifty gallons; holl two ounces of rock alum in a pint and a half of water for ten minutes or a quarter of an hour; take it from the fire and dissolve by degrees, an ounce of salt of tartar. When the mixture is milk-warm pour it into the spirits, stir the whole well together for five minutes and bung the cask down close.

When wine is to be fined, draw off a jugful, and dissolve isinglass in it, in the proportion of half an ounce to ten gallons, and then pour back through the bung-hole. Let it stand a few weeks longer. Tap the casks above the lees. When the isinglass is put into the cask, stir it round with a stick, taking great care not to touch the lees at the bottom. For *white wine*, mix with the isinglass a quarter of a pint of milk to each gallon of wine. White of eggs beaten with some of the wine, in the proportion of one white of egg to four gallons of wine, makes an excellent fining.

FIR.—This tree, of which there are several kinds, is one of the tallest of European trees. It is peculiarly valuable as a nurse, from being evergreen and closely covered with branches, by which radiating heat is retained; from its conical shape, and rigid stem, by which it does not suffocate or whip the adjoining trees; from its being valuable at whatever age it is thinned out; and from its being an excellent shelter for the most valuable game. It is also an excellent hedge plant for shelter, but is deficient in point of defence and durability.

It grows rapidly on every description of soil, from a very stiff loam, to such as possess a considerable degree of humidity. It should never be planted for the sake of its wood, except in masses or groves by itself; otherwise its timber is so coarse and knotty, that it is hardly worth working; but if planted thickly and in a mass, and properly pruned and thinned afterwards, it may be trained to tall clean timber.

FIRE-ARMS, CAUTIONS RESPECTING.—Fire-arms should never be kept loaded in a house, or if they must of necessity be, they should be placed beyond the reach of children, and have the word "loaded" conspicuously attached to them. Fire-arms should never be pointed in sport at a person; many fatal accidents have occurred through loaded fire-arms having been aimed "in fun," under the impression that they were not loaded. It is questionable whether loaded fire-arms are proper weapons of defence to have in a sleeping apartment; persons of an irritable and excitable temperament, are liable to use them somewhat too freely upon trivial occasions; and persons being suddenly awakened out of sleep by an accidental intrusion, may, acting on the impulse of fear, wound or kill an unoffending fellow-creature. Another consideration is, that burglars may find these weapons before the sleeper awakes, and so turn them against him. In lonely and remote localities, however, it is as well that the knowledge should get abroad that the occupier of a house is always prepared with these means of defence.—See GUN, PISTOL, &c.

FIRE ESCAPE.—The escape from a house which is on fire is sometimes prevented by the stairs being of wood, and either burning or already destroyed. In such an emergency there are only two means of escape—issuing by the roof, and so reaching the next house, or descending into the street through the window. As the former mode of escape is the readiest and less dangerous, every house should be provided with a trap door opening on to the roof, furnished with a broad wooden ladder, communicating with the landing place below. Where this is wanting, a rope-ladder should be kept in every sleeping apartment; this ladder may be either furnished with steps, or simply knotted at intervals, to support the hands and feet in their descent. A large iron nail or bracket might be fastened near the window, so that in the moment of danger the rope-ladder might be instantly hung on it without any delay. Where, from carelessness, no fire-escape of this kind has been provided, two or more sheets or blankets taken from the bed may be tied to each other by the corners, and thus a rope may be formed. Public fire-escapes afford the readiest and most convenient form of rescue; but, as the arrival of them cannot always be calculated on, the precautions previously mentioned should always be taken. When a person has to traverse rooms or passages where the fire is actually raging, he should creep along the floor on his hands and knees, and if the opportunity is afforded him, he should

envelope himself in a damp blanket, by means of which he will be enabled to escape from the threatened danger comparatively unhurt.

FIRE, EXTINGUISHING AND PREVENTING.—The calamitous accidents arising from fire might be frequently prevented by the exercise of a little salutary caution. The carrying candles about bedrooms and holding them carelessly over drawers filled with linen &c., is a prolific cause of fire. Lighting gas with pieces of paper and throwing them carelessly away; dropping lighted tobacco on the floor, and not putting it out; leaving lucifer matches about for children to play with; standing too near the fire-place with light and expansive dresses on, are all fraught with the same danger. Another frequent cause is the raking out fires on retiring to rest; live embers being sometimes scattered about the room and left to smoulder until they burst into a blaze. This great mistake is committed under the two-fold idea of safety and economy, the latter consideration being as erroneous as the former; for the embers being separated and scattered, will generally burn longer and more freely than if left to die out in the grate. Fires might often be readily extinguished by the timely application of a few buckets of water. When an apartment is found to be on fire, the door, chimney, and windows should be immediately closed, if possible, and only opened for the purpose of projecting water on the flames. By this means the supply of air will be cut off, and rapid combustion prevented. The same rule applies to the lower doors and windows of a house, which are often injudiciously kept open or removed, with the mistaken view of rendering assistance. The mixture of certain agents with the water employed for extinguishing fire has also been found to increase its efficacy. Sal-ammoniac, in the proportion of five ounces to the gallon, exerts this influence in a remarkable degree. Several other articles, as common salt, pearlash, or kitchen soda, act in the same way, though less effectively. It must also be observed that all of these remedies must be applied before the fire has reached great height, otherwise little or no effect will be produced.—See BURNS, CHIMNEY, &c.

FIRE-GUARD.—Nurseries and other rooms which children are in the habit of occupying should always be furnished with this useful and necessary precaution against fire. The cost is trifling, the application of it simple and entailing little trouble. Fire-guards are mostly constructed of brass or iron wire, closely woven together, to prevent the hand from being thrust in, or the live coals withdrawn; it is also furnished with two or more hooks, by which it is fastened on to the bars of the grate.

FIRE INSURANCE.—See INSURANCE, FIRE.

FIRE-IRONS, PRESERVATION OF.—When fire-irons are not likely to be wanted for some weeks or months, and during which period a housemaid may be absent with the family she is serving, it is desirable to rub them over with a little Florence oil; when it is requisite to remove the oil from the steel-

work a little dry whiting may be dusted over it, and the whole rubbed clean off with leather. Fire-irons in summer should be tied up in green baize bags, and hung near the kitchen fire, or in any other office where there is usually a fire. It should be known that when once fire-irons or other steel articles become rusty, they are with great difficulty recoverable, and dull spots, therefore, which are the first indications of rust, should be carefully rubbed off immediately they appear.

FIRE, LIGHTING AND MANAGEMENT OF.—Although this would appear a simple process, yet, from inattention and want of thought, it very frequently fails. The wood used for lighting a fire should be of a proper length and thickness; for, if in too large pieces, the iron of the grate abstracts the heat so much from the commencing flame, that it will not have strength enough to kindle the wood: or, if it does take fire, the combustion is too feeble to set light to the coals that are heaped upon it. Nor should the paper be laid at the bottom of the grate, as is frequently done. The best way is to lay a few pieces of inflammable coal at first on the bottom bars, but without covering them entirely; then lay on the paper or shavings, then the wood, and on that some pieces of round coal of the size of eggs, and no small coal: when the whole is kindled, let it burn up before any more is added. If the small coal be put on first, it is sure to choke the fire, by filling up the vacancies, and preventing the air from having access to the centre. The coal laid at the bottom will take fire by the time that the wood is nearly burnt out, and will, by its flame, keep the fire alight. If a fire be thus prepared and kindled, there is no reason why it should go out, and it ought to burn up with certainty when left to itself. When a fire is lighted in a stove with bright bars, the paper, wood, and coals should be laid a little way back from the front, otherwise the bars will be blackened and discoloured. The management of a fire is as important as the lighting; coal should not be thrown on in too large a quantity at a time, as it causes the chimney to smoke; it also suffers a great deal of the hydrogen to be distilled off, and consequently a large portion of the heat required to warm the room, escapes up the chimney in the shape of smoke. The warmth derived from fires depends almost entirely upon the radiation of heat proceeding from the centre of the fire; it is therefore important to keep the front of the grate in a glowing red heat, without suffering the unburned coals to fall down and obtrude themselves between the bars. To promote this, brick balls are sometimes put into the fire, and when these are properly managed, they assist in throwing out radiant heat by becoming red-hot; but they require much care and attention, as they are apt to collect together and choke up the fire, thus doing more harm than good. Much of the comfort and advantage of a fire depends upon the quality of the coals: they should not be too luminous, otherwise they smoke so fast as to require frequent stirring and breaking. The use of the poker is, in

many instances, misunderstood; its office is to open a languishing fire, so as to admit the free passage of air into it, or apportioning the remains of a half-burned fire so as to concentrate the heat, whilst the parts still ignited are opened to the atmosphere. A fire properly lighted and judiciously managed, will give double the amount of heat at half the cost, that a badly lighted and ill-regulated fire affords.—See BELLOWS, COAL, COKE, &c.

FIRE-PROOF BOXES, CLOSETS, &c.

—The principle upon which these should be constructed is, that they should be made of such materials as are not only incombustible, but as little as possible capable of being heated. Metals are not combustible by ordinary fires; but, as they are susceptible of being made extremely hot, they are not proper for this purpose. If the joints are not perfectly close, so as to exclude the external air, papers and other inflammable substances will be burnt and consumed in them in case of a fire; and even should the joints fit quite tightly, papers in them will at least be charred and rendered useless. Brick, soft stone, layers of pumice, charcoal, and other porous substances, are the best non-conductors of heat. Fire-proof boxes should, therefore, be constructed of these materials, which may be eased with sheet iron, merely to keep them together. Air is a good non-conductor; therefore two boxes of non-conducting materials, with a space of a few inches between them, will be far safer than any single box. The inner box should rest upon pieces of pumice, and should not touch the external one anywhere: or the space between the two boxes should be filled with pumice.

FIRE-PROOF CLOTHING.—Cloth made of the fibres of asbestos by weaving, will bear a considerable heat without injury. Cotton and linen fabrics prepared with a solution of borax, phosphates of soda, or sal-ammoniac, may be placed in contact with ignited bodies without their suffering active combustion or bursting into a flame. These substances act by forming a species of glaze on the surface of the fibres, which excludes them from the air. The addition of about an ounce of alum or sal-ammoniac to the last water used to rinse a lady's dress, or a set of bed furniture, or a less quantity added to the starch used to stiffen them, renders them unflammable, or at least so little combustible that they will not readily take fire. Chloride of zinc is, however, the most active incombustible agent in such cases, and will render a lady's dress quite secure from the ravages of fire. Paper, wood, and other materials, may be rendered incombustible by soaking them in any of the above solutions.

FIRE-PROOF HOUSES.—The rendering a dwelling-house fire-proof is a matter of great importance, furnishing, as it does, the occupant with perfect comfort and security. This precaution is all the more necessary for country dwellings, where a house may be on fire for a long time before any assistance arrives, or any means are found for ex-

tinguishing it. The chief means proposed have been iron roofs, floors supported by iron or flat brick arches, plaster or what is called flagging under the flooring-boards, stone or iron staircases, brick or at least brick-nogged partitions, metal sashes, iron plating round all timbers: in short, using metal or brick, and slate, wherever it is possible, instead of wood.

FIREWORKS.—The three principal materials employed in this manufacture, are charcoal, nitre, and sulphur, along with filings of iron, steel, copper, or zinc, or with resin, camphor, lycopodium, or other substances to impart colour, or to modify the defect in duration of combustion. Gunpowder is used either in grain half-ernshed, or finely ground, for different purposes. The longer the iron filings are, the brighter red and white spots they give, those being preferred which are made with a coarse file and quite free from rust. Steel-filings and cast-iron borings contain carbon, and afford a more brilliant fire, with wavy radiations. Copper filings give a greenish tint to flame; those of zinc, a fine blue colour; amber affords a yellow colour, as also resin and common salt, but the last must be very dry. Lamp-black produces a very red colour with gunpowder, and a pink one with nitre in excess; it serves for making golden show-ers. When this substance is lightly mixed with gunpowder and put into cases, it throws out small stars, resembling the rapiers of a spur. The yellow sand or glistening mica, communicates to fireworks golden radiations; verdigris imparts a pale green; sulphate of copper and sal-ammoniac give a palm-tree green. Camphor yields a very white flame and aromatic fumes. Benzoin and storax are also used on account of their agreeable odour. Lycopodium burns with a rose colour and a magnificent flame.

FISH BAIT.—See BAIT; FLIES, ARTIFICIAL, &c.

FISH BAKED.—Some kinds of fish are better baked than boiled, especially that class that furnishes the smallest amount of nutrition; as the process of baking tends to the retention of the nutritive qualities of food while it is being dressed. In baking fish, generally, the oven employed should be of a very moderate heat; the time is not of so much consequence as the temperature, so much so that fish may be left in a slow oven for hours without injury.

FISH BOILED.—Fish that is to be boiled must be put on the fire in cold hard water; when it boils, skim with the greatest care, throw in a cupful of cold water to moderate the heat; then keep it simmering only, lest the outer part break before the thick and inner part be done; but "crimped fish" should be put into boiling water and simmered for a few minutes. A large handful of coarse salt, with a small piece of salt-petre and a little horseradish, should be put into the water in which fish is boiled; it is also reckoned finer by the addition of two or three spoonfuls of vinegar. Care must be taken to preserve the roe, milt, and liver whole; to let them be sufficiently dressed, and to arrange them conspicuously when

served. The sound adhering to the bone must be left there, but very carefully cleaned. To judge if a large fish be sufficiently boiled, draw up the fish plate, and with a thin knife, try if the fish easily divides from the bone in the thick parts, which it will when done enough. Keep it hot, by laying the fish-plate crosswise on the kettle, and covering with a thick cloth moistened with hot water; if left in the water after it is dressed it loses its firmness and becomes woolly. Great care is necessary to drain the water from boiled fish, that its dryness may not be lessened, or its colour deteriorated.

FISH BROILED.—When fish is to be broiled, it should be seasoned and floured; the gridiron on which it is cooked should be rubbed over with suet when hot, to prevent the fish sticking to the bars. The fire should always be very clear, to prevent the fish being impregnated with smoke, and great care should be taken not to scorch it.

FISH CAKE.—Remove the bones and skin from any fish that is left at dinner, and put it into warm water for a short time. Then take it out, press it dry, and beat it in a mortar to a fine paste with an equal quantity of mashed potato; season to taste. Make the mass up into round flat cakes, and fry them in butter or lard till they attain a fine brown colour.

FISH COLD, TO DRESS.—Dip a flat dish in hot water, to prevent cracking; smear it with butter and sprinkle white pepper on it; then a thick layer of finely grated stale bread; then a layer of fish separated from the bones and broken small; a little melted butter poured over a layer of bread; then a layer of fish with butter as before, repeated as often as required for the quantity of fish and size of the dish. Smooth the surface with a spoon, and sprinkle lightly grated bread and pepper on the top. Place it for twenty or thirty minutes, according to thickness, before a brisk fire, with a tin shade at back of dish to refract the heat. Take it up when sufficiently browned.

FISH CURRIED.—Cut cold boiled fish into thick slices, and fry them with butter. In as much vinegar as will cover the fish boil a little salt, two or three cloves of garlic, a good deal of turmeric finely pounded, three cloves, a little ginger, nutmeg, and black pepper, as much as will season it sufficiently; pour this over the fish. Cover it closely, and when it has stood for twenty-four hours, it will be fit for use. Boiled rice will be found an excellent accompaniment for this dish.

FISH CUTLETS.—Chop a considerable quantity of herbs with a small piece of shallot; season it with pepper and salt, and put it into a stewpan with two ounces of butter; as the butter is melting add a teaspoonful of essence of anchovies. Do not suffer the butter to get beyond melting point, and mix the whole thoroughly together. Then cut any kind of fish dressed or raw into cutlets; and when the herb seasoning is nearly cold, spread it on the fish thickly with a knife; dredge the fish with bread crumbs, and cook them on butter pans in an oven, or before the fire. Stew a chopped

onion with any green vegetables in season; cut it into slices in a little broth; add nasturtiums with a little of the pickle; place them in the centre of the dish, and arrange the cutlets round.

FISH FORCEMEAT.—Chop and afterwards pound in a mortar, any kind of fish, adding one or two anchovies, or a teaspoonful of the essence of anchovies, together with a hard boiled egg. Pound the fat of bacon separately, and then mix with the foregoing; add a third portion of bread, prepared by soaking and pounding previously, and mix the whole up with raw eggs.

FISH FRIED.—After the fish has been well cleaned and washed, wrap it in a clean soft cloth; and when perfectly dry, moisten it with egg, and sprinkle over it finely grated bread crumbs. Place it in a frying-pan containing hot lard or dripping, and let fry tolerably quick, until it is of a light brown colour. If the fish be done, and still retains a pale hue, draw the pan to the side of the fire, take the fish carefully up, and place it either upon a sieve turned upwards, or on the under side of a dish, and let it then drain before the fire and finish browning. If desired to have a particularly delicate appearance, the fish should be enveloped in a sheet of foolscap paper. Fish fried in oil obtains a much finer colour than when dressed in lard or dripping. Butter should never be used, as it imparts a bad colour.

FISH FRITTERS.—Make a light forcemeat with fish of any kind, then put a small quantity into pieces of puff paste; fry them in boiling lard, and drain them dry. Serve them with truffles or bechamel sauce.

FISH, GOLD AND SILVER.—These are very sensitive and susceptible creatures, and should therefore be treated with great care and delicacy. The globe in which they are kept should be capacious; this should be placed in a light cheerful situation, at the same time avoiding the sun, the heat of which, intensified by the glass, would be fatal to the occupants of the globe. They should have a supply of fresh river water every day, and when they are removed for this purpose, a net should be used, and not the hand. While being thus removed, they should be put into a bowl of fresh water with a few bread crumbs in it, and after remaining there an hour, placed in their usual habitation. In giving bread, care must be taken not to leave it in the water for any considerable length of time, or it will become sour and kill the fish. As they are averse to noise and violence, they should not be disturbed by loud shouts or whistling, nor should the vessel in which they are, be shaken. Noisome smells are also frequently fatal to them. To propagate gold and silver fish, they must be put into reservoirs of considerable depth, in some parts at least, shaded here and there with water lilies, and constantly supplied with fresh water. Care must be taken to collect the spawn when it appears on the surface of the water, as otherwise it will be destroyed by the fish themselves. This spawn should be put into

a vessel and exposed to the sun, until vivified by the heat.

FISH GRAVY.—Skin two or three eels or some flounders; gut and wash them very clean; cut them into small pieces, and put them into a saucepan. Cover them with water, and add a little crust of bread toasted brown, two blades of mace, some whole pepper, sweet herbs, a piece of lemon-peel, an anchovy or two, and a little horseradish. Cover close and simmer; add butter and flour, and boil with the above.

FISH PATTIES.—Take a carp, a tench, and an eel, boil them slightly; half stew six oysters; pick the flesh from the bones of the fish, add some mace and a little white wine, and mix all well together. Make some rich puff paste, line tins with it, then put in a portion of the forcemeat, with one oyster and a bit of butter; cover with paste, and bake till done.

FISH PIE.—Boil two pounds of small eels, then having cut the fins quite close, pick the flesh off and throw the bones into the liquor, with a little mace, pepper, salt, and sliced onion; boil till quite rich, and strain it. Make forcemeat of the flesh, lay at the bottom of a dish an anchovy, parsley, lemon-peel, salt, pepper, bread crumbs, and four ounces of butter warmed. Take the flesh of soles, small cod, or dressed turbot, and lay on the forcemeat, having previously rubbed it with salt and pepper. Pour the gravy over and bake.

FISH POND.—A collection of water employed for the purpose of propagating and feeding fish. The qualities of a pond, to make it profitable for breeding fish, differ materially from those required for the feeding of them, inasmuch as some particular ponds serve only for the purpose first named, and others for the last mentioned; and the same pond is scarcely ever found efficient for both purposes. The indications of a good breeding pond are—a considerable quantity of rushes and grass about its sides, with gravelly shoals, such as horse ponds usually have. The spawn of fish is very prolific, and when the owner of the pond wishes the fish to grow to some size, he is frequently compelled to thin their numbers, to prevent their starving one another. It may also be necessary to put in other fish that will prey upon the young, and thin them in the quickest manner. Eels and perch are most useful on this account, because they prey not only upon the spawn itself, but upon the young fry, from the first hatching to the time they are of a considerable size. Some fish are observed to breed indifferently in all kinds of water; of this nature are the roach, pike, and perch.


FISH, PROPERTIES OF.—The white kinds of fish, as cod, haddock, flounders, &c., are easy of digestion, but not very nutritious; the oily kinds, salmon, eels, herrings, &c., are more difficult of digestion. The class of fish most highly esteemed is that which comes from the sea; river fish ranks next, and last in point of quality is the fish of ponds or lakes. The best sea fish is that which feeds in rocky places; the next, that which swims in deep waters; and the last

wholesome, the fish that approaches nearest the coast. The oil of all fish is more or less unwholesome; generally speaking, therefore, the fish which is the least oily is to be preferred. In cooking fish, as far as health is concerned, the best mode is boiling—broiling and frying not agreeing with some stomachs. Whenever fish is used for stews, it is always advisable to put a little wine with it, to correct its watery tendency.


FISH RAGOUT.—Take carp, tench, pike, perch, and eels, clean and scale them well, and cut them into pieces for serving; put into a stewpan a good sized piece of butter, add some flour to it, and let it fry to a pale brown; add a quart or two of good bouillon, with a couple of glassfuls of red wine and a few cloves and onions. When this boils up, put in the fish, stew it till done, sprinkle lemon-juice over it, and serve.

FISH, SALT.—When fish is very salt and dry, it must be soaked in water a long time before it is boiled. Lay it in cold water for some hours until it is well softened. Brush it very clean, wash it thoroughly, and put it with plenty of cold water into the fish-kettle, place it near the fire, and let it heat very slowly indeed. Keep it just on the point of simmering, without allowing it ever to boil, from three quarters of an hour to an hour, according to its weight; should it be small and thin, less time will be sufficient for it. From the commencement, while the fish is boiling, the scum should be carefully removed.

FISH SAUCE.—To about four ounces of melted butter, add three tablespoonfuls of mushroom-ketchup, a tablespoonful of essence of anchovies, a tablespoonful of white wine vinegar, some cayenne, and a teaspoonful of soy.

 Melted butter, 4ozs.; ketchup, 3 tablespoonfuls; anchovy essence, 1 tablespoonful; vinegar, 1 tablespoonful; cayenne, sufficient; soy, 1 teaspoonful.

FISH SAUCE, FOR PRESERVING.—Chop forty anchovies, bones and all, put to them ten shallots cut small, a stick of scraped horseradish, a quarter of an ounce of mace, a quart of white wine, a pint of water, one lemon cut in slices, half a pint of anchovy liquor, a pint of red wine, twelve cloves, twelve peppercorns. Boil the whole together till it is reduced to a quart; then strain, bottle off, and cork it securely, and put in a cool dry place. One teaspoonful of this sauce will be sufficient for half a pound of butter. Warm the sauce first, and then put the butter in to melt, with a little flour.

 Anchovies, 40; shallots, 10; horseradish, 1 stick; mace, $\frac{1}{2}$ oz.; white wine, 1 quart; water, 1 pint; lemon, 1; anchovy liquor, $\frac{1}{2}$ pint; red wine, 1 pint; cloves, 12; peppercorns, 12.

FISH SAUCE, WITHOUT BUTTER.—Simmer a quarter of a pint of vinegar and half a pint of soft water, together with an onion, half a stick of horseradish scraped, four cloves, two blades of mace, and half a teaspoonful of black pepper. When the onion is quite tender, chop it small with a couple of anchovies, and set the whole to boil for a few minutes with a tablespoonful of ketchup;

in the meantime have ready, well beaten, the yolks of three eggs; strain them, mix the liquor by degrees with them, and when they are well mixed, set the saucepan over a moderate fire, holding a basin in one hand, into which toss the sauce to and fro, and shake the saucepan over the fire, to prevent the eggs from curdling.

Vinegar, $\frac{1}{2}$ pint; soft water, $\frac{1}{2}$ pint; onion, 1; horseradish, $\frac{1}{2}$ stick; cloves, 4; mace, 2 blades; black pepper, $\frac{1}{2}$ teaspoonful; anchovies, 2; eggs, 3 yolks.

FISH SOUP.—Take a dozen flounders, or any small flat fish, and the same number of perch; gut and clean them carefully; put them into a stewpan with two quarts of strong veal broth; add a few slices of lean ham, two or three carrots, onions, and heads of celery cut in slices; some sweet herbs, salt, and cayenne. Stew the fish till it will pass through a coarse sieve; then return it into the stewpan, with a good lump of butter and some flour to thicken it; add two glassfuls of white wine and a table-spoonful of garlic vinegar. This stock, if once reboiled, will, in cold weather, keep well for a month; and when served as soup, the quantity may of course be reduced according to the number of the party intended to partake of it.

FISH STEWED.—Take some good veal-stock, chopped shallots, anchovies, horseradish scraped, and a few slices of lemon-peel; season with cayenne pepper, salt, and lemon-juice. Boil all these together for about a quarter of an hour; strain the liquor, put the fish into it and stew it; when nearly done add a couple of glasses of red wine; serve in a deep dish with fried bread arranged round it.

FISH, TAINTED, TO SWEETEN.—The application of strong vinegar, or of acetic acid, will sweeten fish when the taint is but slight. The vinegar should be used pure; and one wineglassful of the acid should be mixed with two of water. Pour either of these over the fish, and rub it on the parts which require it, then leave it untouched for a few minutes, and wash it afterwards well, changing the water two or three times. When the fish is considerably tainted, no remedy will render it fit for human food, and it is therefore better to reject it at once.

FISH, TO CHOOSE.—The signs of the freshness and good condition of fish are unmistakable. If fresh, the eyes will be bright, the gills of a fine clear red, the body stiff, the flesh firm, yet elastic to the touch, and the smell not disagreeable; but if the fish be stale, the very reverse of these conditions will make themselves apparent.

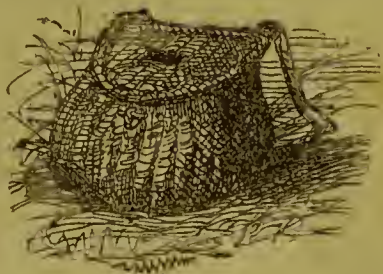
FISH, TO CLEAN.—This operation requires scrupulous delicacy and nicety, to be performed properly. Wash the fish well, but do not leave it longer in water than necessary, as it loses its flavour by being soaked. Handle it lightly, and when the scales are to be removed, lay the fish flat upon its side, and hold it firmly with the left hand, while the knife is being used with the right; turn it, and when both sides are done, pour or pump sufficient water on the fish to remove the loose particles; then proceed to remove

the internal parts, and do this without opening the fish more than is necessary for the purposes of cleanliness. Be careful not to leave the smallest portion of offensive matter in the inside; wash out the blood entirely, and scrape or brush it away, if useful, from the back-bone. In cases where the scales of the fish are left on, the outside of the fish should be well washed, and afterwards wiped with a coarse cloth, drawn from the head to the tail. The gills of all fish (with the occasional exception of the red mullet) must be taken out, and the fins of fish generally should be cut off, with the exception of turbot, of which fish they are considered a great delicacy. All the articles employed in this operation should be carefully cleaned when they are done with, and the dresser or other place wiped with a damp flannel.

FISH, TO PRESERVE.—Fish of the smaller kinds are best preserved if washed and dressed, then wiped gently as dry as possible, and hung up separately by the head in some cool place, and where they may be submitted to the action of the air. When there is danger of their being attacked by flies, a wire safe, placed in a strong draught of air, is the best place to preserve them. Soles will in winter remain good for two days when thus prepared; and whittings and mackerel may be similarly kept without losing any of their excellence. Cod-fish may be preserved by having salt rubbed slightly along the back-bone; salmon is best preserved by rubbing the inside with vinegar, and sprinkling it with pepper. When the weather is excessively sultry, however, all these modes are unavailing, and the only plan is to cook the fish partially without delay.

FISHING.—See **ANGLING**.

FISHING BASKET.—This should be made of wicker-work, with two openings for a leathern strap to pass through, which strap should encircle one shoulder and be buckled, so that it may be let down or taken



up as occasion may suit. During the process of fishing the basket may hang easy, and will thus encumber the arms less; but on the return home, if well laden, it is most conveniently carried when drawn up tightly under the arm. There are great varieties of fishing baskets made to suit varied fishings. Much depends on the country fished in, the fish angled for, and other circumstances.

FISHING, LAW OF.—Every person has a right to fish in the open sea, and in the tide-way of rivers, but in rivers which are not navigable, the fish belongs to the owners of the soil on each bank. Everyone who fishes in private water is liable to be considered as a trespasser: the law in this respect enacting, "That if any person shall unlawfully and wilfully take or destroy any fish in any water which shall run through or be in any land adjoining or belonging to the dwellinghouse of any person being the owner of such water, or have a right to fishery thereof, such offender shall be guilty of a misdemeanour, and, being convicted thereof, shall be punished accordingly; and if any person shall unlawfully and wilfully take or destroy, or attempt to take or destroy, any fish in any water not being such as aforesaid, but which shall be private property, or in which there shall be any private right of fishery, every such offender, being convicted thereof before a justice of the peace, shall forfeit and pay over and above the value of the fish taken or destroyed (if any), such sum of money not exceeding £5, as to the justice shall seem meet: provided always, that nothing hereinbefore contained shall extend to any person angling in the day-time; but if any person shall by angling in the day-time unlawfully and wilfully take or destroy, or attempt to take or destroy, any fish in any such water as first mentioned, he shall, on conviction before a justice of the peace, forfeit and pay any sum not exceeding £5; and if any such water as last mentioned, he shall, on the like conviction, forfeit and pay any sum not exceeding £2, as to the justice shall seem meet; and if the boundary in any parish or township shall happen to be in or by the side of such water as is hereinbefore mentioned, it shall be sufficient to prove that the offence was committed either in the parish or township named in the indictment or information, or in any parish or township adjoining thereto."

FISHING LINES are made of various substances according to the fish they are intended to capture, and are treated of under the headings of the several sorts of fish. They are constructed of hemp, silk, hair, vegetable fibre, and silkworm gut twisted or plaited either together or singly. There is the sea-line and the eel or night-line generally made of twisted or plaited hemp, the trolling and spinning line of plaited silk, either dressed or undressed, the fly or casting line of silk or hair, or silk and hair united, and the general running line of any or either of the descriptions mentioned. There is also the bottom or foot line of finer and better material, either silkworm gut or hair, single or twisted, according to circumstances.

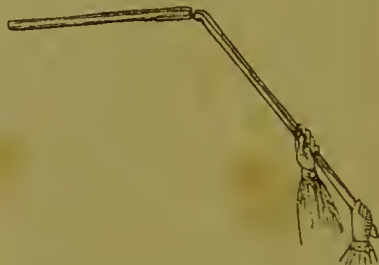
FISHING-NET.—An angling appendage intended to keep alive the fish taken. The hoop-net may be of any dimensions, from ten inches to a foot and a half. It is usually constructed of circular pieces of cane, one of which forms the upper end, the other the lower, while the third sustains and keeps open the centre portion.

A fourth and smaller circle forms the mouth of the net, which is drawn up and closed by means of its cord. This cord, of some yards' length is attached to it, and by its means is first lowered into the water, and then secured either by fastening it to a bough of a tree or to a spike inserted in the ground. In the use of this net it is to be noticed, that when a strong current is flowing it will be prudent either to put a stone within the net, or to have the lower part of it loaded with lead. The reason of this caution is, that in the current it sometimes happens that the net will become closed by the buoyancy of the cane and thus drown the fish. In addition to this appendage, there is what is termed a lauding net, intended to render more secure the fish after it is captured. There is also a minnow-net, in which the small fish of that name taken for the purpose of bait are secured.

FISHING RODS are made of ash, deal, hazel, bamboo, cane, hickory, and various kinds of wood; and the kind of rod to be used depends upon the fish intended to be caught; there is the trolling rod, the spinning rod, the fly rod (for trout, &c.), either single or double handed, the salmon rod, the roach rod, the general rod, the punt rod, &c.—See BARBEL, CARP, DACE, ROACH, &c.

FIXTURES.—In law, a term generally applied to all articles of a personal nature affixed to land. This annexation must be by the article being let into, or connected with the land, or with some substance previously connected therewith. Thus, a barn built in a frame, not let into the earth, is not a fixture; a brewer's stills set in brickwork, resting on a foundation, are fixtures. And the application of the same principle gives in every case the true rule to judge whether anything be a fixture or not. Whatever is thus fixed, becomes by law parcel of the freehold; it is therefore on general principles not removable; but there are exceptions to this rule, established by custom.

FLAIL.—A wooden instrument used for threshing out grain. It consists of two parts, the handstaff and the beater. The first is a light rod of ash, about five feet in length, slightly increased in breadth at the lower extremity, where it is perforated for



the passage of the thongs that bind the beater to it. The beater is a rod about two feet and a half or three feet in length, which is best made of some compact wood, such as thorn. If the beater be not properly applied,

it will soon separate into splinters; and to prevent this it should be constructed to fall upon the edge, instead of its flat or convex side; this is easily accomplished in the formation. The usual form of the beater is cylindrical, but frequently thickened a little towards the extreme end. It is usually attached to the handstaff by a strap of leather, or of untanned hide. When mounted in this manner, the beater is formed with two projecting ears, standing at right angles to the side on which it is intended to fall, and about an inch and a half from the end by which it is attached; serving the purpose of retaining the heater within the strap. The strap is about eight inches long and an inch and a half broad; it is bent over the end of the beater, and the tails are brought to embrace the sides of it beyond the ears. The strap being previously perforated with four holes in each tail, it is bound by a thong of leather laced through the holes and round the neck of the beater; the upper turn of the lacing thong catching the ears, prevents the strap from slipping off. The strap thus applied forms a loop standing about an inch beyond the edge of the beater; and through that, and the perforation at the end of the handstaff, another and a stronger thong is passed several turns and secured; thus forming a kind of loose swing joint that allows free action to the beater in its gyration round the head of the threshers and its descent upon the threshing-floor. Another mode of mounting the beater is by applying a plate of iron in place of the leathern strap, which is fixed to the wood by rivetting, leaving a loop as before, which must be neatly rounded and smoothed, to prevent the too rapid chafing of the thong by which it is bound to the handstaff, in the same manner as described above.

FLAN.—A sweet dish made as follows:—Mix a tablespoonful of flour with a tablespoonful of brandy or orange-flower water, eight yolks of eggs, and a little salt; when well mixed, add a quarter of a pound of sugar to a pint of milk, which pour over the eggs, stirring all the time; put the mixture into a buttered tart-pan, and bake it in a moderate oven for half an hour; powder it with sugar, and serve.

Flour, 1 tablespoonful; brandy or orange-flower water, 1 tablespoonful; eggs, 8 yolks; salt, sufficient; sugar, $\frac{1}{4}$ lb.; milk, 1 pint.

FLANNEL, PROPERTIES OF.—As an article of clothing, flannel is superior to any other, both for personal comfort and the preservation of health. When worn as underclothing its advantages are numerous and important. It acts on the surface of the skin, and exercises the most beneficial action, by keeping the pores clean and in a state most favourable to perspiration. It has also the advantage of absorbing the perspiration as soon as emitted, and allowing its watery portion to pass off into the atmosphere almost as soon as formed. Thus, persons who wear flannel next their skin, seldom catch cold from changes of temperature, even though perspiring profusely. In a variable climate

like that of England every person should wear flannel, not only in the colder season, but throughout the year; the substance of the material being regulated according to the coldness or mildness of the season. In fact, flannel is required even more in summer than in winter, because persons perspire more freely in warm than in cold weather, and are consequently more susceptible of cold; while at that period of the year their clothing is less capable of protecting them from the effects of sudden changes of temperature. Flannel clothing should be removed at night upon going to bed, otherwise the body does not receive the due amount of warmth and comfort from it during the day. Some persons imagine that flannel may be worn with impunity for an extraordinary length of time without changing; but this is an error, as flannel in time, from the repeated absorptions of perspiration which it undergoes, has a species of incrustation forming on its surface, which impedes rather than assists the operation of the pores, and creates considerable irritation of the skin. Flannels, therefore, for the purposes of health and cleanliness, should be changed once a week. Flannel is sometimes objected to from the irritation it causes when first worn, and for this trifling inconvenience is often discarded after a few hours trial. This may in part be obviated by turning the flannel, and wearing the smooth and outer surface next the skin.

FLANNEL, TO CLEAN AND PRESERVE.—

To wash flannel.—Take half the weight of soda that there is of soap, boil them with water, allowing a gallon to every pound of soap, and use it when perfectly cold. Wet the flannel in cold water, then wash it in fresh cold water, with some of the boiled mixture amongst it; wash them in this, changing the water till the flannel becomes perfectly clean; then rinse it well in cold water, and dry it in the shade. *To scour flannels.*—Slice half a pound of yellow soap, and dissolve it in boiling water, so as to make it of the thickness of oil; cover the flannels with warm water, add a lump of pearl-ash, and about one-third of the soap solution; beat them till no head rises on the water; then pour it off, and proceed as before with hotter water, without pearl-ash.

To prevent flannels from shrinking.—Put them on the occasion of the first washing into a pailful of boiling water, and let them lie till cold. *To preserve the colour of flannels.*—Mix four tablespoonfuls of flour with four quarts of water, and let it boil, stirring the whole time. When it has boiled thoroughly, put the flannel articles that are to be washed into a pan or tub, and pour over them half the quantity of the mixture in a boiling state. When the water has become cool enough to hold the hand in it, wash the flannels in the usual way, but without the addition of soap; then rinse in three or four waters, and having let them drain as much as possible, put them back into the tub or pan, and pour over them the remaining flour and water in a boiling state. When cool enough, wash them as before; rinse well, and lay them out to dry without wringing.

FLATULENCE, unless in exceptional cases, such as from ill-cooked food, an excess of vegetable diet, &c., is always an indication of impaired functional action of the stomach, either proceeding from a disease of that organ or through sympathy with some other part; but by far the greater number of those who suffer from flatulence owe it to a weakened state of the stomach itself, often hereditary, frequently the result of an erroneous dietary, and sometimes from the injudicious habit of over stimulating; besides these cases, it frequently proceeds from mental anxiety, imperfect mastication of the food, and a close sedentary habit.

Flatulence is often completely cured by strict attention to dietetic rules, such as avoiding for a time all vegetables and fruits, making the breakfast and tea on hard crusts, biscuits or dry toast, and *chewing* these for a considerable time before *permitting* the food to pass into the *stomach*; at the same time taking as small a quantity of fluid in the way of tea, coffee, or cocoa, as possible, and only sufficient to facilitate the descent of the solid food; meat and bread for dinner, with a sparing draught of cold gin and water should constitute the meal. The tea should be a repetition of the breakfast, and a supper of biscuit and cheese with a small tumbler of cold spirits and water, the same as that for dinner; a system like this, with exercise, repose on a sofa for half an hour after each meal, and using the *flesh brush* night and morning *over the chest and shoulders*, and especially across the stomach, so as to excite the organ to increased action, will be found to yield the fullest advantage, and in many cases will supersede the necessity of any medicine whatever. When, however, there is much acidity in the stomach, it should be neutralized by a teaspoonful of magnesia, or half a drachm of carbonate of soda, a short time before any one of the meals, and when the bowels require it, a compound assafoetida pill at bed-time; the same regimen as to diet being persevered in, as that above. Where the stomach has become seriously enfeebled by a long continued state of flatulence, it will be necessary in addition to either of the former plans, to give the organ tone and strength, by employing one or other of the subjoined pills, adopting them in the order in which they stand. Take of

Sulphate of zinc . . . 10 grains—powder,
Rhubarb, powdered . . . 20 grains,
Extract of gentian, sufficient to make a
mass,

which divide into thirty pills, one to be taken three times a day. Take of

Nitrate of silver—
Lunar caustic . . . 3 grains—powder.
Quinine 4 grains.
Ginger 6 grains.

Mix well, and add extract of camomile sufficient to make a mass, which divide into twenty-four pills, one to be taken three times a day. When flatulence is attended with a sense of coldness in the stomach, a teaspoonful of "Gregory's Powder," with ten grains of soda, may be taken in the little aromatic water before breakfast each morning.

FLEA.—The troublesome little animal that infests our clothing and haunts our households, is produced from various sources, but, generally speaking, owing to the accumulation of dust and dirt. Carpets, blankets, and every article manufactured from wool should be so well attended to as to prevent any accumulation of dust from settling in them. The blankets used in the cribs and beds of children should for this reason be daily shaken, and, weather permitting, hung before an open window, that the air may pass through and cleanse from dust their loosely woven fabrics. The refuse known as "flue," which collects in bedrooms is very favourable to the propagation of fleas, as dust and down combined contain the nourishment nature has ordained for the young of this animal, and therefore the mother-flea seeks to lay her eggs wherever this combination can be found. The vicinity of dog-kennels, pigeon-cotes, fowl-houses, &c., are amongst the causes of the rapid production of fleas in some houses. Although flea-bites are irritating to persons of all ages, they prove particularly so to children. Hence particular care should be taken to keep the nurseries in a state of cleanliness. Although many specifics have been promulgated for the extermination of this pest, when once it has made itself felt, there is none that can be said to be entirely successful. But cold, light perfumes, such as camphor, will certainly tend to diminish them; and they also betray a rooted aversion to cold water.

FLESH.—See FAT, FIBRIN, FOOD, &c.

FLESH BRUSH.—An instrument which is exceedingly advantageous, in exciting a healthy stimulus to the skin, and may be adopted to any extent short of actual irritation; the most suitable times for using them are upon rising in the morning, and when taking a bath. The *flesh glove* is a useful modification of the flesh brush, and is especially adapted for tender and sensitive skins.

FLIES.—The common house fly causes considerable annoyance to the person, and damage to the furniture of a household. It is in vain to attempt to exclude them, and the fly-poison usually vended generally attracts more flies into a house, than it destroys. A domestic remedy which is partially successful will be found in a strong decoction of quassia, thickened with moist sugar, or by mixing together a teaspoonful of black pepper, two of brown sugar, and four of cream. It should also be known, that flies will not pass through a netting made of fine silk thread or wire, even though the meshes be an inch apart, provided there is no window behind it: this affords a ready means of excluding these insects from all apartments which have windows only on one side of them, which may at the same time be kept wide open. If, however, there is a window on the other side of the room, the flies will pass through the netting immediately.

FLIES, ARTIFICIAL, are made of fur, wool, leathers, mohair, silk, gold and silver twist, and similar materials, and are, as their name partly implies, intended to be as close an imitation of the living creature as possi-

ble, so as to deceive the fish they are used to capture. Any one who has once acquired a taste for fly-fishing will not change it for any other of the sports of the field, the loch, or the moor. The species of our fresh-water fish to be taken with artificial flies are, salmon, trout, grayling, chub, dace, bleak, and occasionally, both as to locality and time, roach, pike, perch, and bream. Artificial flies are not merely imitations of flies strictly speaking, for the various descriptions of insects are indeed numerous, there being nine orders, which are again subdivided into families,



genera, and species. Ronalds well remarks, "After all, what is a descriptive catalogue of the best insects for fly-fishing? If followed blindly without intelligence, it will be as useless as a dictionary in the hand of untutored youth. But use it intelligently as a help, not as an oracle, and it will assist and facilitate your studies. But it requires ingenuity and perseverance, observation and judgment, ay, travel too, and experience to make a good angler!" Books: *Daniell; Blaine; Davy; and Ronalds's Fly Fisher's Entomology*, 5th edition.

FLIES, NATURAL, as used for angling, comprise almost every insect that either crawls, hops, or flies.—See **FLIES, ARTIFICIAL**.

FLOAT.—An article used by anglers to regulate the position in the water of the



bait used in fishing, and to show when they get a bite; it is made of cork, turkey,

swan, goose, or porcupine quills, reeds, and some anglers use even glass floats; the float, like the rod and the line, varies, according to the particular fish intended to be angled for.

FLOATING.—See **SWIMMING**.

FLOOR.—An improvement has been introduced in the laying down of floors, by which warping is prevented, and the risk of their being burned through considerably lessened. For this purpose boards are sometimes laid down three inches thick, while, to prevent the warping and also to render the process of cleaning more easy, when the floors are newly laid, cover them over with a copious soaking of boiled and hot linseed oil, and afterwards paint them with two coats of good oil colour. Very little warping will take place after this, and a slight sponging with cold water will at all times be sufficient to render them clean.

FLOOR, TO CLEAN.—See **BOARDS**.

FLOOR-CLOTH.—A painted material adapted to those floors that are subjected to much wet and dirt, as halls, pantries, kitchens, &c. They are made either in rolls of different widths, from five-eighths of a yard to a yard or more, or in large breadths fitted to the room which they are intended to protect. The foundation of these cloths is ordinarily of flax, but old carpeting will answer the purpose extremely well. A strong oil paint composed of white lead and linseed oil, with a large proportion of litharge, is laid on smoothly for four consecutive coats, and a pattern is printed by blocks, consisting of circular rollers with metal projections, under which the cloth is drawn after it has received its coats of paint. In choosing floor-cloths, those are to be preferred that are painted on a fine cloth, which is well covered with the colour, and the patterns of which do not rise much above the ground, as they wear out first. The durability of the cloth will also in a great measure depend on the time it has been painted, and the quality of the colours. If they have not been allowed a sufficient time to harden, a very little wear will injure them; to ensure this latter condition, therefore, it is as well to keep floor-cloths some time before they are used, hung up in an outhouse or a spare room, where they will be kept dry and have plenty of air. When taken up for the winter they should be rolled round a carpet roller, and carefully turned, so as to prevent the paint from cracking. The objections to floor-cloth is that it strikes cold to the feet, and in the course of time affects the whole body. In apartments, therefore, where floor-cloth is employed, a mat or rug should be laid down on that portion of the floor where the feet are likely to remain longest. To clean floor-cloths, sweep them, then wipe them with a flannel, and when all dust and spots are removed, rub with a waxed cloth, and then with a dry plain one; but use little wax, and rub only enough with the latter to impart a certain degree of smoothness, or it may cause persons to fall, by being too slippery. Washing occasionally with milk, after the above sweeping and dry rubbing, gives them a fine glossy appearance, and renders them less slippery.

FLOTSAM.—Goods found floating on the sea; these belong to the Crown or the lord of the manor, unless claimed by the owner within a year and a day.

FLOUNDER.—One of the most common of the flat fish. It is found all round the English coast, particularly near the mouths of large rivers, which it generally ascends. They are in season from January to March, and from July to September.—For cooking, they should be stiff and thick, and their eyes bright and full. They should be dressed as fresh as possible, as they very soon become flabby and tainted. Flounder is a river fish as well as a sea fish, and is caught in the Trent and a few of our other rivers. It must be angled for at the bottom, with or without a float, hook No. 8, 9, or 10, and any kind of small worm for bait.

FLOUNDERS BOILED.—Set on the fire a stewpan with a sufficient quantity of water to cover the flounders that are to be dressed, add some vinegar and horseradish, and when the water boils put in the fish, having been previously well cleaned and their fins cut off; let them boil slowly, to prevent their being broken, and when they are sufficiently done lay them on a fish plate, with their tails in the middle. Serve them with parsley and butter.

FLOUNDERS BROILED.—Cleanse and wash as many flounders as you may require, dry and rub them over with oil, and sprinkle salt and pepper over them; broil them on a gridiron over a slow fire, and serve with capers, or any other sauce preferred.

FLOUNDERS FRICASSEED.—Carefully clean the fish, and take off the black skin, but not the white; cut the flesh from the bones in long slices, and dip them in yolk of egg; strew them over with bread raspings, and fry them in clarified butter; when they are sufficiently done, lay them on a dish, and keep them hot. For sauce, take the bones of the fish, boil them in water; then put in an anchovy, some thyme, parsley, a little pepper, salt, cloves, and mace; let these simmer till the anchovy is dissolved: then take the butter in which the fish were fried, put it into a pan, set it over the fire, dredge some flour into it, stirring in the meanwhile, then strain the liquor into it, and boil it till it becomes thick; squeeze some lemon-juice into it; and serve the fish in a dish, with the sauce poured over them.

FLOUNDERS FRIED.—Well rub them inside and out with salt, then let them lie for two hours, to give them some firmness. Dip them in egg, cover them with bread-crumbs, and fry them of a light brown colour.

FLOUNDERS STEWED.—Fry some flounders till they attain a light brown colour, then take them up, and add to the butter they were fried in, a sufficient quantity of water to make sauce for the fish that are dressed; to a quart of water add two anchovies, an onion cut in slices, a tablespoonful of ketchup, and a wineglassful of red wine, let it simmer for a quarter of an hour; pour it on to the fish, and stew them gently

for a quarter of an hour; then take them out and put them into a hot dish; thicken the sauce with butter and flour; give it a boil, strain it off, and pour it over the fish.

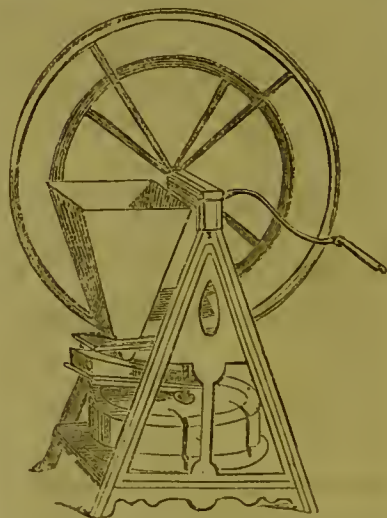
FLOUR.—The meal of wheat-corn finely ground and sifted. It represents the following properties:—1. *Fecula*, which is insoluble in cold water, but soluble in hot water. 2. *Gluten*. 3. A saccharine matter, susceptible of the spirituous fermentation. Flour is very susceptible of injury, both by the breeding of insects, and from atmospheric influences. To prevent these consequences, it should always be carefully and thoroughly dried before it is stored away; the barrels or other vessels in which it is put should also be dried before they are used; and it should then be placed in a room tolerably warm and dry.

FLOUR, ADULTERATION OF.—See **BREAD, ADULTERATION OF.**

FLOUR BOILED.—Tie a quantity of fine flour in a linen cloth, as tightly as possible, dip it several times into cold water, dredge the outside of the cloth with flour until a crust is formed round it, to prevent the water soaking into it while boiling; boil it for a long time, and when cold, divide it into small oblong cakes. For use, it is reduced to powder, and is then prepared like arrowroot, in which condition it forms an excellent diet for children suffering from diarrhoea, &c. It enjoys the advantage of being easily prepared, and also of being free from adulteration.

FLOUR CAUDLE.—Mix smoothly a tablespoonful of flour with a gill of water; sweeten a gill of milk, and when it boils, add the flour and water; simmer and stir them together for a quarter of an hour.

FLOUR-MILL.—A hand flour-mill for family use is shown in the accompanying engraving. It consists of one wheel and



pinion, and a fixed French burstone, with a similar stone in motion to cover it. The

corn passes through a hopper in the usual manner, and comes out from the stones fit for the bolting machine. This mill requires two men to work it, and the price is from ten to sixteen guineas. The employment of a mill of this kind for a household, has many advantages: by its means, security is furnished against adulteration, the expense and inconvenience of sending the grain to the mill are avoided; and the flour is better economized, and more certainly preserved, by being prepared in small quantities only, as it is required for use.

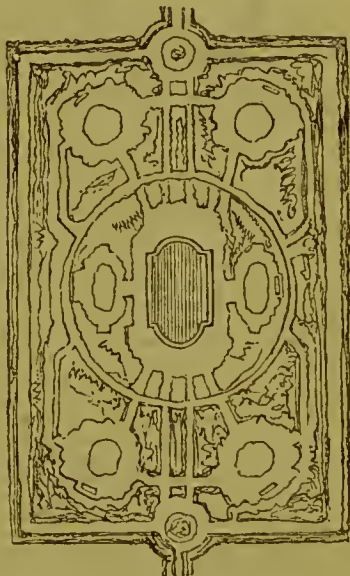
FLOUR PUDDING.—To four ounces of flour, add an ounce of sugar, three-quarters of a pint of milk, one egg, and six grains of ginger; mix the ingredients thoroughly together and boil.

Flour, 4ozs.; **sugar**, 1oz.; **milk**, $\frac{3}{4}$ pint; **egg**, 1; **ginger**, 6 grains.

FLOWER GARDEN.—The situation of the flower garden should be conveniently near to the house, so as to afford ready access at all times, especially during winter and spring. In *exposure and aspect*, the flower garden should be laid out in such a manner as that it may derive the greatest possible advantage from the sun and air. It should not be naturally low in surface, nor of a wet retentive soil, nor rendered damp and gloomy by surrounding high trees, or lofty walls or buildings. If it happen that a house be nearly surrounded by a flower garden, the variety of aspect thence afforded will be favourable to the continuance of the bloom of flowers, far beyond what can be obtained if confined to a southern exposure. South, south-east, and east, are the aspects most advantageous to the growth of flowers; and, possessing these varieties of exposure, the bloom of a garden may be protracted some weeks beyond the time it could be preserved under a single aspect. The *extent* of the flower garden depends jointly on the general scale of the residence, and the particular taste of the owner. If the form of the ground where a pasture is to be situated is sloping, its size should be larger than when the surface is flat. *Shelter* is essentially requisite for the flower garden. The plantation on the side next the garden should begin with the lowest shrubs, and rise in gradation to the trees, which, unless in the north, should not be of the tallest kinds. A few elegant shrubs, and one or two trees, may be scattered through the scene, either in the dug compartments, or the turf glades, for the purpose of shelter and shade, as well as ornament; but in general, much of either of the two former qualities is highly injurious both to the culture of flowers and the thick closeness of turf; besides rendering the garden unfit to be resorted to in the winter and spring seasons. Sometimes an evergreen hedge will afford all the shelter requisite, as in small gardens composed of earth and gravel only, but when the scene is large, and composed of dug compartments placed on a lawn, the whole may be surrounded by an irregular border of flowers, shrubbery, and trees. The soil best adapted for a flower garden is one of common good qualities, and

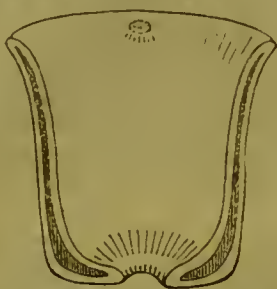
moderately light and mellow. Negatively the ground should never be excessively strong and clayey; and mere gravel is very intractable. The *surface* of the flower garden is regulated by the superficial extent; if that be small, and the plants to be grown are chiefly florists' flowers, or other select kinds, in beds separated by gravel walks, a level or gentle and uniform slope will be found most suitable; but where the limits are more extensive, and turf and shrubs are introduced, a wavy surface, either naturally or rendered so by art, will have the best effect.

The form of a small garden will be found most pleasing when some regular figure is



adopted, as a circle, an oval, an octagon, a crescent, &c.: but where the extent is so great as not readily to be caught by a single glance of the eye, an irregular shape is generally more convenient, and it may be diversified by agreeable figures, or component scenes, by the introduction of shrubs, so as to divide the space. A variety of forms may be indulged in without offending taste; and a simple parallelogram divided into beds running lengthwise, or the larger segment of an oval, with beds running parallel to its outer margin, will always please. On general principles, it should be observed, that as flower gardens are objects of pleasure, they must be laid out with taste. But in flower gardens, as in other objects, there are different kinds of tastes; these embodied are called styles or diameters, and the great art of the designer is, having fixed on a style, to follow it out unmixed with other styles, or with any deviation interfering with the kind of taste or impression which that style is calculated to produce.

FLOWER POT.—The ordinary form of these implements of horticulture are well known. Several improvements have been introduced from time to time. One of these is the flower-pot illustrated in the accompanying engraving. This has double closed



sides, and may have the vacuity filled with water through a small orifice in the rim, or be left empty at pleasure. By this means plants are prevented from suffering for want of water when the vacuity is filled, and from losing the heat, which would be carried off by evaporation if the pot were not furnished with hollow sides. Various other means have been adopted for obtaining the same end; and, generally speaking, it will be sufficient if the flower-pot containing the plant be put within another, at least two sizes larger than itself—the two flower-pots being joined together by a little cement at its base. *The flower-pot saucer* is a flat circular vessel, with a rim from one to two inches high, and is made somewhat larger than the bottoms of the pots. Its chief use is to prevent the water, which escapes by the bottom of the pot, from proving inconvenient on the shelves or stages in rooms or particular situations. A form of saucer has been introduced as much larger than the pot to be placed in it as to admit of surrounding its base with water, in order to keep away ereeping insects. In the centre of the saucer is raised a basement on which to place the pot, to keep it dry.

FLOWER STAND.—These articles of use and ornament may be obtained in every



variety of shape and form. For plants in pots *fig. 1* is admirably adapted; it consists chiefly of basket-work made of brass wire. It is mounted upon a mahogany or oak elawed pedestal set on castors. A shallow zinc tray is placed within, to prevent the water that may pass through the pots from falling on to the carpet. The plants must be packed in moss, kept perfectly green and fresh on the surface. For cut flowers *fig. 2* is one of the most suitable. It is made



water-tight within, with the usual provision for drawing it off every day in order that fresh water may be supplied. The top is covered with a portable fine brass wire grating, the meshes being about half an inch square, to support the flowers and keep them in an upright position. All stands with cut flowers should be provided with glass shades, to be put on at night, to secure them from the dust that must necessarily arise. The moss and sand being saturated with water when they are put in will tend to preserve the flowers much longer than if placed in water alone.

FLOWERS, ARTIFICIAL.—The form and combination of these articles of personal decoration mainly depend on the taste and ingenuity of the maker. The materials generally employed are velvet, kid, and fine cambric for the petals, and taffeta for the leaves, and very recently thin plates of bleached whalebone have been successfully introduced. The colours are ordinarily produced as follows:—Blue, indigo dissolved in oil of vitriol, and the acid partly neutralized with salt of tartar or whiting; green, a solution of distilled verdigris; lilac, liquid archil; red, earmine dissolved in a solution of salt of tartar, or in spirits of hartshorn; violet, liquid archil, mixed with a little salt of tartar; yellow, tincture of turmeric. These colours are usually applied to the petals with the fingers.

FLOWERS, PRESERVATION OF.—Flowers may be preserved in a fresh state for a considerable time, by keeping them in a moist atmosphere. Another method, by which some flowers may be preserved for many months, is to carefully dip them, as soon as gathered, in perfectly limpid gum water; and after allowing them to drain for two or three minutes, to set them upright, or arrange them in the usual manner in an empty vase. The gum gradually forms a transparent coating on the surface of the petals and stems, and preserves their colour

and figure long after they have become dry and crisp. *Faded flowers may be generally more or less restored* by immersing them half-way up their stems in very hot water, and allowing them to remain in it until it cools or they have recovered. The coddled portion of the stems must then be cut off, and the flowers placed in clean cold water. In this way a great number of faded flowers may be restored, but there are some of the more fugacious kinds, on which it proves useless. Flowers may be produced in winter by taking up the plants, trees, or shrubs, in the spring, at the time when they are about to bud, with some of their own soil carefully preserved around the roots, and placing them upright in a cellar till Michaelmas; when, with the addition of fresh earth, they are to be put into proper tubs or vessels, and placed in a stove or hot-house, when they must be treated in the usual manner. By this method in the month of February, fruits or roses will appear. Flowers sown in pots about Michaelmas, may thus be made to bloom at Christmas.

FLUMMERY.—Put finely ground oatmeal to steep in water for three days. Pour off the tlin of the first water, and add more water. Stir up, strain, and boil this with a little salt till smooth and of the thickness required, adding water at first; if it be in danger of becoming too stiff, a piece of hutter is an improvement and a little white sugar. Serve in a basin with milk, wine, cider, or cream.

FOG.—In meteorology, a dense vapour near the surface of the land or water. Fogs, in general, are the consequence of the nocturnal cooling of the atmosphere. The air by its rapid cooling becomes surcharged with moisture; a part of which being precipitated in the form of a cloud, gives rise to the ordinary fog. During the day the heat of the sun generally disperses the fog, because the quantity of moisture which the air is capable of holding becomes more considerable in proportion as its temperature is increased. Fogs are peculiarly injurious to pulmonary subjects and to persons whose respiratory organs are at all affected; such persons should shun going out into a fog if possible; but if they cannot avoid doing so, they should take every precaution to prevent the noxious atmosphere entering the lungs.

FOOT, DEFORMITIES OF.—There are many varieties of malformation, or deformity of the feet, proceeding either from accident or a congenital cause, and in some instances, arising from weakness either in the bones, muscles, or ligaments of the part, depending originally on a general debility or want of tone in the system. Deformity of the foot is caused either by an overlapping of the bones of the ankle joint, the contraction or paralytic action of the adjacent muscles, drawing one or more bones from their articulation, or from some malformation in the joint before birth. The most common and remarkable malformation of the feet, is the deformity known as club-foot, of which there are four varieties, described under different names by surgeons,

but which will be understood by an account of the position of the foot in walking. The first variety, is a simple drawing up of the heel, the individual walking on the balls of the toes. In the *second*, the heel is still drawn up, the inner edge of the foot is drawn outwards, and the whole member twisted inwards, in such a manner as to compel the sufferer to walk on the outer edge, and sometimes on what in its natural position would be the top of the foot. In the *third* variety, the outer edge of the foot is so raised up as to throw the tread on the inner margin of the foot. And the *fourth* is that in which the whole foot is pressed forward, the toes uppermost on the front of the leg, the patient walking upon the heel only. The treatment of all these deformities, when they proceed from spasm or paralysis, is to remove the cause, by adopting a course of purgatives and a soothing system of fomentations; or when rheumatism is the exciting cause, by such remedies as are admissible in that disease; but when the contraction has become permanent, the cure can only be effected by dividing the tendons of the contracted muscles. This operation is performed by passing a narrow-bladed knife under the tendon or tendons, the principal always being the "*Tendo Achillis*," and cutting outwards, so as to divide the tendon; after a time the foot is placed in its natural position, and by a proper apparatus kept so till the tendon, by means of the interposition of *callus* or fresh matter, is re-united, and as a consequence elongated by the amount of new deposit thrown out. When the union is perfect, the foot is to be strengthened by friction, salt water bathing, tonics, and galvanism.

FOOTMAN.—The footman's routine of business is, in a complete establishment, of a subordinate description. In the morning he assists in cleaning the furniture, windows, &c., and preparing first and putting by afterwards, the articles used for the breakfast table. He then cleans himself and prepares to attend the carriage, to answer bells, or to obey any orders given him by his master or mistress. At dinner he again attends, having previously assisted to prepare the table for it. His next duty is to clean and put away the same things. At tea he again waits; and, generally speaking, his daily avocations end after this meal is finished. *The footman in small establishments* has more general and constant occupation. In such cases the performance of the various duties are left to be regulated in a great measure by the servant himself; and in order to render them lighter and more agreeable, he should adopt a certain method, by which his daily work is to be ruled. He must rise early, and endeavour to get some of the roughest part of his work finished before breakfast. In order to preserve the cleanliness of his clothes, he should be provided with a complete overall suit, made of materials that will easily brush clean or bear washing. In this dress he cleans the boots, knives, &c. After this, he cleans and washes himself, previously to the preparation for the family breakfast table.

After the footman has himself breakfasted, and replaced all the articles used, he must direct his attention to the cleaning of candlesticks, trimming of lamps, &c. The furniture he must rub daily, and window cleaning he must perform as opportunity offers. In the after part of the day he must make the preparations for the dinner-table. During this part of the day he should be attired in a dress that is not inconsistent with his employments, nor yet unfit for him to appear in if summoned to the parlour or street-door. A coloured cotton or plain cloth jacket and white linen apron are usually worn by footmen while thus engaged. When he attends his mistress in her walks or drives, he should be scrupulously neat and clean. In giving orders to the coachman he should be quick and accurate. Nor is it altogether out of place to remark that the knock at the door, by which he announces his mistress's visit, is to be performed with a certain measure and degree; if too long and loud it disturbs the surrounding neighbourhood, and if too insignificant it savours of disrespect to the visitor.

FOOTPAN.—Footpans are either of wood, earthenware, or metal, as tin or zinc. Small tubs are apt to sever at the joints when they remain by dry for any time; earthenware is free from that objection, but as the interior if glazed, is unpleasantly slippery, it is best to have a loose piece of board to cover the bottom, loaded with lead to keep it down. Those made of zinc painted in oil are perhaps the most suitable.

FOOT WARMER.—This usually consists of a box containing a tin vessel, in which hot water is put, being carefully wadded round, to keep in the heat; the lid is also



wadded. This will remain warm for some hours when shut, and is very useful to put the feet on when occasion requires it.

FORCEMEAT.—Take an equal quantity of lean veal scraped and beef suet shred; beat them in a marble mortar; add pepper, salt, cloves, pounded lemon-peel, and nutmeg grated, parsley and sweet herbs chopped fine, a little shallot and young onion, a few bread crumbs grated fine, and yolk of egg sufficient to work it light; roll this into balls with a little flour. If for white sauce, boil them; if for brown sauce, fry them.

FORCEMEAT BALLS FOR FISH, SOUPS, &c.—Beat the flesh and soft parts of a middling sized lobster, half an anchovy, a large piece of boiled celery, the yolk of an egg hard boiled, a little cayenne, mace, salt, and white pepper, with two tablespoonfuls of bread crumbs, one of oyster liquor, two ounces of butter warmed, and two eggs well beaten; make into balls, and fry them of a nice brown colour in butter.

FORCEMEAT COLLOPS.—Mince the remains of hash or any other meat, and set it over the fire in a stewpaa, with a slice of butter, a sprig of parsley, and green onions shred fine, shake in a little flour, and moisten with stock; add pepper, and reduce it to a thick sauce, then leave it to cool. Make a paste with flour and water and a little butter and salt; knead and roll it with a rolling-pin as thin as a half-crown; place the meat upon it in small masses, at a distance of two or three inches from each other; wet the paste all round the meat, pinching the paste round the meat with the fingers. Cut the collops separately and fry them of a light brown colour.

FORCEMEAT RAGOUT.—Pat a slice of fresh butter into a saucepan with some sorrel, lettuce, chervil, parsley, and green onions; let the whole be well washed, squeezed, and chopped fine; shake the saucepan over the fire till the liquor of the vegetables is entirely consumed, then shake in a little flour, moisten with some gravy, and add salt and pepper. Let the mixture boil till the herbs are well done and the sauce wholly consumed; then add the yolks of three eggs beaten up with cream, and thicken the ragout over the fire without letting it boil.

FORCING.—In horticulture, the art of accelerating the growth of plants, so as to obtain fruits or flowers at seasons when they are not produced naturally in the open air.—See CONSERVATORY, HOTBED, HOTHOUSE, GREENHOUSE, &c.

FORFEITS.—A pastime usually played by a number of persons of both sexes. The ordinary mode is to select some sentence, which each person of the party is to repeat without making a mistake, and in the event of his so doing, he has to forfeit to some person chosen for the purpose any trifling article, such as a card-case, smelling-bottle, fan, &c. When the sentence has gone the round of the party, one of the company has to kneel with her head in the lap of the person holding the forfeits; this latter person holds up the forfeits one by one in sight of the whole company, and says, "Here's a pretty thing, and a very pretty thing, and what's to be done to the owner of this pretty thing?" The person kneeling down has then to impose some penalty which involves some ludicrous situation, and is calculated to produce laughter and good humour among the company present. This accomplished, the forfeited article is returned to the owner. By this it is evident that the person who has to impose the forfeits should possess a fund of humour and ready invention; and, to ensure uninterrupted sport, some person should be selected gifted with these attributes.

FORGET-ME-NOT.—A well-known flower belonging to the species *Myosotis*. It may be propagated by seed, by dividing the roots in spring, or by setting cuttings in a shady place in summer under a hand-light. In winter they may be treated like alpine plants, and will bloom long and well. This flower prefers a moist soil, in the neighbourhood of ponds and streams.

FORK.—A domestic implement manufactured of various metals, as silver, steel, &c. Plated forks in imitation of silver are much used, and answer equally well for general purposes. Forks should be cleaned with great care, especially between the prongs, and this may be done with a piece of leather tied to a stick, and afterwards wiped with a cloth. Forks that have been used for fish, and juices, or any other mixture likely to impart an unpleasant flavour or an unsightly appearance, should, immediately after being used, be plunged into a can of boiling water and suffered to remain there some time until the flavour or stain is entirely removed.

FORK, IN HUSBANDRY.—A tool of which there are three principal species. The first made with three prongs for working with litter, haulm, or stable refuse; the second, having two prongs, for stirring the earth among numerous roots, as in fruit-trees or flower-borders, or for taking up roots; and the third about a foot and a half in length, the prongs of which are small and round, and should be kept carefully polished, for plunging pots in bark pits, or taking up asparagus or other roots.

FORMA PAUPERIS.—Where any person has just cause of suit, and is so poor that he can make oath he is not worth £5 after all his debts are paid, and excepting the property in question, upon oath made of this fact, and a certificate from a barrister that he has good cause of action, the court will permit him to sue in *forma pauperis*, without paying any fees to counsel, attorneys, or clerks in court. If a cause go against a person thus suing, he is liable to imprisonment for the costs of the defendant.

FOWL BOILED.—Put it on with plenty of water a little warmed, and in a flannel cloth; skim the liquor very carefully, and let it simmer by the side of the fire from thirty-five minutes to an hour and a half, according to the size and age of the fowl.

FOWL BOILED, WITH RICE.—Boil a pint of rice in as much water as will cover it, and in it put black pepper, a few blades of mace, and half a dozen cloves, tied up in a small cloth; when the rice is tender, take out the spice; stir in a piece of butter; boil a fowl and a piece of bacon, and lay them in a dish; cover them with the rice; lay around the dish and upon the rice, hard eggs, cut in halves, quarters, and lengthways, with onions boiled first, and afterwards fried.

FOWL BRAISED.—Put a little bacon into a stewpan, then a fowl, a large onion, half a carrot, half a head of celery, two bay-leaves, two cloves, a peppercorn, one and a half tablespoonfuls of salt, a little pepper, and a quart of water, let it simmer till tender; dish up, after having well drained it, take the string off, and pour over it mushroom or any other sauce.

FOWL BROILED.—Have a fowl ready plucked and drawn, open the back from one end to the other with a sharp knife, having previously cut off the feet at the second joint; make an incision in the skin, and pass the bone through, to fix it internally; lay the fowl on the table breast downwards, beat it as flat as possible with a chopper,

take out the breast bone, and also the rough part of the interior of the back, especially if a large or old fowl; after you have it in nice shape, season all over with a teaspoonful of salt and half a teaspoonful of pepper; put it on a gridiron over a slow fire, turning it every five minutes till done; if a young one, twenty-five minutes will be ample time, but by trying it with the finger on the thick part the result may be known; if firm when pressed it is done, or by pressing the wing, if tender it is also done; serve with mushroom sauce.

FOWL CURRIED.—Skin the fowl, cut it into small pieces, and lay them in cold water for an hour; mince an onion and put it into a saucepan with two ounces of fresh butter, and a little flour stirred in by degrees; when it is well browned add three pints of water, and put in the fowl, and a large tablespoonful of curry powder; boil until the fowl is quite tender. Sprinkle with the juice of half a lemon and serve.

FOWL FORCED.—Having boned a fowl, stuff the inside with a forcement made as follows:—A quarter of a pound of minced veal, two ounces of grated ham, two ounces of chopped onion and suet, a tablespoonful of sweet herbs shred, two hard yolks of eggs chopped, a teaspoonful of mixed lemon-peel, mixed spices, and a little cayenne. Shred the several ingredients, and beat the whole to a paste in a mortar, adding two eggs, to make them incorporate. Stuff the fowl with this mixture, sew it up, and still retaining the natural shape, draw the legs inside and truss the wings. Stew it in clear stock, and when nearly done, thicken the sauce with butter rolled in flour. When just ready to serve, add a little cream, squeeze a lemon into the dish, and serve the fowl with sauce around it.

FOWL FRICASSEED.—Divide a fowl into eight pieces, and put them into a stewpan, cover with boiling water, and season with a teaspoonful of salt, a little pepper, a bunch of parsley, four cloves, and a blade of mace; let it boil for twenty minutes; pass the stock through a sieve into a basin; take out the pieces of fowl, trim them neatly; then put into another stewpan two ounces of butter, with which mix a tablespoonful of flour, moisten the stock, put in the pieces of fowl, stir occasionally until boiling, skim well, add twenty small onions, and let it simmer until the onions are tender, then add a gill of cream, in which the yolks of two eggs have been mixed, stir it quickly over the fire, but do not let it boil; take out the pieces, dress in the form of a pyramid upon a dish and serve. If it is required to warm up the remainder of the above, put it into a basin, which set in a stewpan having a little water in it; put on the cover, and let it boil gently; by these means the contents of the basin will become warm, without the sauce being affected.

FOWL FRIED.—Cut fowl into rather small pieces, and put them into a basin with a little salt and pepper, a tablespoonful of oil, two tablespoonfuls of vinegar, and a little chopped shallot; stir the whole well together, and let it remain for half an hour;

have ready a quantity of butter, and take a fork and dip each piece one after the other into it; then let it drop into a fryingpan, in which is sufficient hot fat to cover them; fry them till they obtain an agreeable colour, and serve in the form of a pyramid, with fried parsley on the top, and any sauce preferred underneath.

FOWL HASHED.—Take the lean portions of the remains of a fowl from a previous dinner, chop it into small pieces; then put into a stewpan a teaspoonful of chopped shallot, with half an ounce of butter, pass them for about three minutes over the fire, add a teaspoonful of flour; mix well, then add the fowl and a gill of white sauce, or more if not sufficiently moist; season with pepper and salt, and serve with mashed potatoes.

FOWL PIE.—Make a paste and forcemeat. Bone a young fowl and lay it flat on a clean cloth breast downwards; season the interior with a little pepper, salt, and chopped onions; spread a layer of forcemeat over, half an inch in thickness. Take ten pieces of veal a quarter of an inch thick, and the same length as the fowl, then have the same number of pieces of fat bacon; lay half of the veal and bacon alternately on the fowl, well seasoned with pepper and salt, cover over with more forcemeat, then another layer of veal and bacon, and more forcemeat again; then roll the fowl over, making the skin meet at the back; have a pie-dish lined both with paste and forcemeat; lay in the fowl, sprinkle with pepper salt, and more forcemeat until a dome is formed; place a pat of butter and two bay-leaves on the top, and bake it in a moderate oven for about two hours. Gravy may be made from the bones of the fowl.

FOWL RAGOUT.—Half roast a fowl, cut it up into joints, place them in a stewpan with some good stock, and add a couple of onions, two dozen corns of allspice and black pepper, a few cloves, and a piece of lemon-peel. Skim the stew, and keeping the lid quite close, let it simmer for three quarters of an hour or more, according to the age and size of the bird. Strain off the gravy, leaving the fowl in the stewpan to keep hot. Take off the fat which forms at the top, and thicken the gravy with brown roux, or butter rolled in brown flour till it is as thick as stiff pancake batter. Add to it a glass of white wine and a sprinkling of lemon-juice. Serve with the sauce poured hot over the fowl and garnished with fried bread.

FOWL ROASTED.—Strip off the feathers and carefully pick every stump from



the skin. Take off the head and neck close to the body, but leave sufficient skin to tie over the part that is cut. In drawing the

bird, do not open it more than is needful, and use great precaution to avoid breaking the gall-bladder. Hold the legs in boiling water for two or three minutes, that the skin may be peeled from them easily; cut the claws, and then with a piece of lighted writing-paper singe off the hairs without blackening the fowl. Wash and wipe it afterwards very dry, and let the liver and gizzard be made delicately clean, and fastened into the pinions. Truss and spit it firmly; flour it well when first laid to the fire, baste it frequently with butter, and when it is done draw out the skewers; dish it, pour a little good gravy over, and send it to table with bread, mushroom, egg, or chestnut sauce.

FOWL ROASTED, WITH CHESTNUTS.—Roast some chestnuts very carefully, so that they may not be burnt, then take off the skins and peel them. Cut about a dozen of them small and pound them in a mortar. Parboil the liver of a fowl; bruise it with a quarter of a pound of ham or bacon. Then mix altogether with a quantity of chopped parsley, sweet herbs, some mace, pepper, salt, and nutmeg. When these ingredients are mixed into a uniform mass, put it into the fowl, roast it, and baste with butter. For sauce take the remainder of the chestnuts, peel and skin them, put them into some good gravy with a little white wine, and thicken it with a piece of butter rolled in flour. Then place the fowl in a dish, pour in the sauce, garnish with lemon, and serve.

FOWL SALAD.—Cut up a pair of cold roasted fowls into twenty or thirty pieces, take off the skin and trim them; lay them in a deep dish, with salt, oil, and vinegar; when they have soaked in this for a short time, place the pieces of fowl on a dish, round which lay some lettuces, well washed and cut into quarters, hard-boiled eggs cut into slices, quartered fillets of anchovy, gherkins, and capers. Pour the dressing over the whole and serve.

FOWL SOUP.—Cut up a large fowl and boil it well in milk and water; thicken with cream, butter, and flour. Add vegetables of different kinds cut into small pieces, such as potatoes, turnips, the heart of cabbage, onions, and celery, with a seasoning of pepper, salt, and mace. Boil all together, and just previously to dishing up, add wine or a little lemon-juice.

FOWL STEWED.—Place four clean skewers at the bottom of a stewpan, and place the fowl upon them. Put in a quart of gravy, a head of celery cut small, and two or three blades of mace. Let it stew gently until there remains only just sufficient for sauce; then add a large piece of butter rolled in flour, a wineglassful of red wine, a tablespoonful of ketchup, and a seasoning of pepper and salt. Dish up the fowl and serve with the sauce poured over it.

FOWL STEWED, WITH OYSTERS.—Truss a fowl as for boiling, put into it plenty of butter, and a seasoning of mace and lemon-peel; tie it at the neck and vent; line a stewpan with streaked bacon, and put in the fowl breast downwards. Moisten with stock, and stew the fowl slowly.

Meanwhile have a thick oyster sauce prepared with butter and cream; dish the fowl on this, and garnish with fried oysters and slices of lemon.

FOWLS, TO CARVE.—When a boiled fowl has to be carved, fix the fork firmly in the centre of the breast, and after disengaging the leg from the skin, take it off with the wing in the line *a b*; or the wing may be previously removed by carving it down the line to *b*, and there separating it from the neck-bone; the leg may then be released



from the skin and easily taken off by cutting around it from *a* to *c*, and then turning it with the fork back from the body, when the joint will readily be perceived. After the leg and wing on the other side have been taken off in the same manner, the merrythought must follow. To remove this, the knife must be drawn through the flesh in the line *d e*, and then turned towards the neck quite under the merrythought, which it will lift from the breast. The neck bones which lie close under the upper part of the wings, must next be disengaged from the fowl by putting the knife in at the top of the joint, dividing the long part of the bone from the flesh, and breaking the short one off by raising it up and turning it from the body; the breast may then be divided from it by merely cutting through the tender ribs on either side. It is seldom that further disjuncting than this is required at table, but when it is necessary to cut up the entire fowl, the remainder of it must be laid with the back uppermost, and to take off the side bones, the point of the knife must be pressed through the backbone, near the top, about half an inch from the centre, and brought down towards the end of the back, quite through the bone, then turned in the opposite direction, when the joints will separate without difficulty. All that then remains to be done is, to lay the edge of the knife across the middle of the only two un-

der, if small, the whole of it may be taken off with the wings, as shown by the line *a b* in the engraving. As the liver is considered a delicacy, it should be divided, and an equal portion of it sent with each wing.

FOWLS, TO CHOOSE.—The male bird is preferable to the female. The age also greatly influences its tenderness and flavour, the flesh after a certain time becoming tough and coarse. The length of the spur will give some idea of the age of the bird; when young, his spurs are short. The beak also furnishes another indication; if upon lifting the dead bird by the beak it will bear the weight, the fowl may be considered an old one; but if the beak breaks off, the bird is a young one. The claws supply a similar test; that is to say, they will break off readily if the bird be young, but if old they will sever with difficulty. A person purchasing a fowl should not judge of its weight by appearance, as various arts are practised to impart a plump appearance which they do not possess; to ascertain the fact more correctly, the fowl should be poised for a few seconds in the hand, and its relative weight may thus be arrived at by any person of ordinary judgment. Fowls, and indeed poultry and game of all descriptions, should as a rule be purchased of some one particular dealer; for poulterers naturally select the best of their stock for their regular customers, and dispose of the indifferent birds to casual buyers. Above all, dealing with itinerant vendors should be carefully avoided; in most cases, men clad in smock frocks and otherwise "got up" to represent country dealers, are in reality artful denizens of London, who purchase the refuse stock at the large markets at nominal prices, and thus palm them off to the public at enormous profits.

FOWLS, TO REAR.—See POULTRY.

FOX.—The ravages committed by this animal among lambs, poultry, geese, and other farm produce, render its destruction in many cases, absolutely necessary. To achieve this, the farmer must take a sheep's paunch and fasten it to a long stick; then rub his soles well upon the paunch, that the fox may not scent his feet. He should then draw the paunch after him as a trail, a mile or more till he gets near a large tree; then leave the paunch and ascend the tree with a gun, and as night advances, the fox will be perceived coming after the scent of the trail, when it may be shot. Or set a steel trap in the plain part of a large field, distant from paths and hedges; then open the trap, place it on the ground, cut out the exact shape thereof in a turf, and take out so much earth to make room for it to stand, and then cover it again very neatly with the turf you cut out. As the joint of the turf will not close exactly, procure some mould from a mole-hill newly thrown up, and stick some grass in it, as is it grew there. Scatter some mould of the mole-hill very thinly three different ways, at the distance of ten or twelve yards from the trap; let this mould be thrown on spots fifteen or sixteen inches square, and when the trap is placed, lay three or four pieces of cheese; and then



divided bones, and then with the fork to raise the small end of the fowl, which will part them immediately. The most delicate parts of the fowl are, the breast, wings, and merrythought. A *roast fowl* is carved generally according to the direction already given, but when it is very large, the breast may be carved in slices like that of a turkey;

with a sheep's paunch draw a trail a mile or two long to each of these three places, and from thence to the trap, that the fox may approach one of the places first; for then he will advance to the trap more boldly, and thus may be readily caught.

FOXGLOVE.—One of the most beautiful and useful of our indigenous plants. It grows on sandy and gravelly banks, in woods and uncultivated places, and flowers in June and July. This plant possesses peculiar medical properties, and it is in this light that it is chiefly to be regarded. The leaves and seeds of the foxglove are both used for medical purposes. When good, the leaves are of a dull green colour, and possess a feeble narcotic odour, and a bitter unpleasant taste. Both the dried leaves and the powder should be preserved in corked bottles, covered with dark-coloured paper, or in well closed tin canisters, and kept in a dark cupboard; the stock should also be renewed yearly, as age considerably diminishes its medicinal activity. Foxglove is diuretic, antispasmodic, and sedative, and possesses the peculiar power of depressing the circulation of the blood. It is administered in fevers and inflammation, and when



given in full doses, reduces the pulse from seventy-five to forty-five or forty beats a minute. In dropsy there is no diuretic medicine so powerful and certain in its action as this, more especially in dropsy of the chest. In diseases of the heart, as enlargement and various other affections, it is very useful in lowering the heart's action, and in epilepsy and insanity it is useful in repressing vascular excitement. The greatest caution is required to be observed in the use of the foxglove, as its effects accumulate in the system; and if given in too large or too frequent doses, will produce giddiness of sight, nausea, faintness followed by vomit-

ing, swooning, convulsions, stupor, and sometimes death.

FRACTURES.—Under this head are understood all broken bones. These are of two kinds, simple and compound fractures, and are treated of under their special heads. —See ARM, LEG, SHOULDER, THIGH, &c.

FRECKLES.—Yellow coloured spots, similar to stains, developed on the skin. There are two varieties, summer freckles: resulting from the action of the sun and heat, during the summer season, and disappearing at the termination of the hot weather; and cold freckles will appear at all times of the year. The latter form commonly arises from disordered health or some general disturbance of the system, to which attention should be chiefly directed. The summer freckles may be removed by the application of any of the lotions following:—1. Bichloride of mercury, 5 grains; hydrochloric acid, 30 drops; lump sugar, 1oz.; rectified spirit of wine, 2ozs.; rosewater, 7ozs.; agitate together until the whole is dissolved. 2. Petals of leaves of red roses, 1 oz.; hot water, 12 fluid ounces; infuse for an hour, and strain with expression, 4 pint; add of citric acid, 30 grains; dissolve, and in a few hours decant the clear. 3. Sal-ammoniac, 1 drachm; spring water, 1 pint; lavender water or eau de Cologne, 4oz.; mix. The lotion made choice of should be applied with the fingers every night and morning, or after, if necessary.

FRENCH LANGUAGE.—The knowledge of this language has ever been found a most useful acquisition, and still more in the present day, when our relations with France, both social and commercial, have become so greatly extended. The readiest and most perfect mode of acquiring this language, is, undoubtedly, to reside for some time in France, by which means the idiom and pronunciation (two of the greatest difficulties), may be mastered in a few months, if a person possesses quick intelligence and is capable of application. But if this opportunity does not offer, the next best plan is to take lessons of a native professor, some of which class are always to be found in our principal cities and towns. But where this opportunity is again denied, the learner may teach himself by the aid of some of the following books:—*Grandincau's First Step*, 3s.; *Vieland's Easy Method*, 6s.; *Tourrier*, 4s.; *Dictionary of Difficulties*, 6s. 6d.; *Le Page's Conversation*, 3s.; *Tiessel's Instructor*, 3s.; *Murgeaud's Easy Access*, 4s.; *Dugobert's Idiomatic Instruction*, 1s.; *Beauvoisin's How to Read and Translate*, 2s. 6d.; *Delille's Lessons*, 1s. 6d.; *Tarver's Oral Progress*, 3s. 6d.; *Ollendorff's Method of Learning*, 12s.; *De Porquet's Phrase Book*, 2s. 6d.; *Nugent's Dictionary*, 6s.; *Foster's Exercises*, 2s. 6d.; *Delille's Grammar*, 5s. 6d.; *Levizac's Grammar*, 5s.; *Cobbett's Grammar*, 5s.; *Cassell's Manual*, 3s.; *Le Page's Prompter*, 5s.; *Jobert's Pronouncing Handbook*, 3s.; *Tourrier's Model Pronunciation Book*, 9s.; *Thibaudin's Pronunciation*, 1s.; *Jobert's Questioning and Answering*, 3s. 6d.; *Fasquelle's Reader*, 2s.; *Du Gué's Translator*, 2s.; *Montoli's French Without a Master*, 2s.; *Bellenger's Word and Phrase Book*, 1s.; *Chapman's French Talk*, 2s.

FRENCH POLISH, FOR BOOTS AND SHOES.—Take of logwood chips, half a pound; glue, a quarter of a pound; Indigo pounded very fine, a quarter of an ounce; soft soap, a quarter of an ounce; isinglass a quarter of an ounce: boil these ingredients in two pints of vinegar and one pint of water, let it continue to boil for ten minutes after the first ebullition, then strain the liquid; when cold it is fit for use. To apply the polish, it must be rubbed on the leather with a piece of sponge; the boots and shoes being previously freed from dust and dirt.

FRENCH POLISH, FOR FURNITURE.—To one pint of spirits of wine, add half an ounce of gum shellac, half an ounce of gum lac, and a quarter of an ounce of gum sandarac; submit the whole to a gentle heat, frequently shaking it, till the various gums are dissolved, when it is fit for use. Make a roller of list, put a little of the polish upon it, and cover that with a piece of soft linnen rag, which must be lightly touched with cold drawn linseed oil. Rub the wood in a circular direction, not covering too large a space at a time, till the pores of the wood are sufficiently filled up. After this, rub in the same manner spirits of wine, with a small portion of the polish added to it, and a most brilliant surface will be produced.

FRENCH PUDDING.—Take half a pound of flour, half a pound of suet chopped fine, half a pound of currants, a quarter of a pound of treacle, and half a pint of milk; mix well, and boil in a basin for three or four hours.


FRENCH SOUP.—Boil a sheep's head and pluck, gently in a gallon of water till reduced to half the quantity, a small teacupful of pearl barley, six large onions, one turnip, one carrot, a bunch of sweet herbs, and a few cloves and peppercorns. Add a little mushroom ketchup, and thicken with some flour rolled in a lump of butter. Cut the meat off the head in slices as for hashed calf's head (taking it out for this purpose as soon as it is sufficiently tender), and then divide the slices into small squares, which must be put into the soup again, when it is warmed up for use. Finish it with forcemeat and little egg balls, and a gill of white wine, which, with the addition of a little sugar, will produce a soup trifling in cost, and nearly equal to mock turtle. The soup is improved by boiling it the day before it is wanted, and warming it up the next day.

FRICANDEL.—A dish made as follows: Take three pounds of the best end of a loin of veal, chop both fat and lean very finely; then soak a French roll in some milk, beat three eggs, add pepper, salt, nutmeg, and mace; make the mixture up into the size and somewhat the shape of a chicken, rub it over with egg and bread crumbs, fry till brown, pour off the fat, boil water in the pan, and stew fricandels in the gravy. Thicken the gravy previously to sending to table.

FRICASSEE.—See BEEF, CHICKEN, FOWL, LAMB, MUTTON, SWEETBREAD, VEAL, &c.

FRITTERS.—Mix a quarter of a pint of milk with three well beaten eggs, and strain the mixture through a fine sieve, add to it gradually three tablespoonfuls of flour, and thin the latter with as much more milk as will bring it to the consistence of cream; beat it up thoroughly at the moment of using it, that the fritters may be light. Drop it in sound portions into a frying-pan containing boiling lard; when lightly coloured on one side, turn them, drain them well from the lard as they are lifted out, and serve them very quickly. They are eaten generally with fine sugar, and orange or lemon juice. See also APPLE, BREAD, CURRANT, ORANGE, POTATO, SPANISH, &c.

FRONTINAC, IMITATIVE.—Boil eighteen pounds of loaf sugar in six gallons of water, with two whites of eggs well beaten. Skim it, and put in a quarter of a peck of elder flowers: take the mixture from the fire, and when nearly cold, stir into it six tablespoonfuls of lemon-juice, and four of yeast; incorporate the whole well with the liquor. Stir it every day, put six pounds of the best raisins stoned into the cask, and tun the wine. Stop it close, and bottle it at the end of six months. It is a wine that requires keeping.

 Sugar, 18lbs.; water, 6 gals.: eggs, 2 whites; elder flowers, ¼ peck; lemon-juice, 6 tablespoonfuls; yeast, 4 tablespoonfuls; raisins, 6lbs.

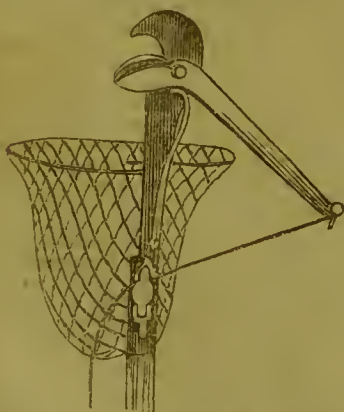
FROST BITE.—This insidious and dangerous affection of the extremities and parts most exposed to frost, as the feet and toes, hands, fingers, nose, and ears, is the result of exposure to extreme cold; and though persons of a phlegmatic temperament, and a sluggish state of the circulation, are more prone to this misfortune than others, yet it may attack persons of all habits of body, and of all ages. The effect of the sudden application of intense cold, or long continued cold of a less severe character, is, in the first instance, to deaden the nervous sensibility, and next to drive the blood from the part most exposed, and leave it in such a state of torpidity as to be unable to resist the killing effect of the surrounding cold, which finding the part thus unprotected with the vitality of nervous energy, or the warmth of circulation, in reality freezes it to death. Though excessive cold is the cause of death either to a part or the entire body, the amount of cold the frame can bear with impunity is remarkable; the actual danger, as far as frost-bite is concerned, resulting from the sudden reaction in the part, from the rise of temperature, or the application of warmth: on this account, the greatest precaution must be observed, in avoiding all abrupt change of temperature, as by forcing the blood suddenly back to the part, inflammation, mortification, and sloughing, must follow. A frost-bite is known by the swelling and discoloration of the part, attended with pain, numbness, and a sense of pricking; the colour, at first bright, becoming of a dull brown, which, if unrelieved, deepens into black. The treatment consists in slowly and very cautiously restoring the circulation, for if the slightest warmth

is incautiously applied, mortification is certain to ensue. The patient should therefore be removed into a cold room, and the part rubbed gently with snow, or bathed with cold water, and on no account allowed to enter a room with a fire, or any heated apartment. After half an hour, a small quantity of weak spirits and water may be taken cold; and ultimately the patient put to bed in cold sheets: the treatment of frost-bite resolves itself into the *slow and careful restoration of the circulation* in the affected part.

FRUIT.—The class of fruit comprised under the heads of acidulous and subacid fruits are antiseptic, aperient, diuretic, and refrigerant. They afford but little nourishment, and are apt to promote diarrhoea and flatulency. They are, however, occasionally exhibited medicinally in putrid affections, and are often useful in bilious and dyspeptic complaints. The saccharine fruits are those abounding in sugar, they are nutritious and laxative, but are apt to ferment and disagree with delicate stomachs when eaten in excess. Stone fruits are more difficult of digestion than the other varieties, and are very apt to disorder the stomach and bowels. As a rule, fruit should never be eaten in large quantities at a time, and only when quite ripe. It then has wholesome properties, and is a suitable corrective to the grossness of animal food. It also exercises a powerful action on the skin, and is a specific for scurvy in its early stages. Many cutaneous diseases may also be removed by the daily use of a moderate quantity of fruit.

FRUIT BISCUITS.—Take of any kind of fruit, an equal weight of the pulp scalded, and of fine white sifted sugar: beat them together for two hours, and make forms of white paper, and fill with the mixture; place them in a cool oven, turn them each day, and in three or four days box them.

FRUIT GATHERING.—Fruit should be



gathered in dry weather, and preferably about noon, because the dew and moisture deposited on them during the night and earlier part of the morning have then evaporated.

They should be quite ripe, when gathered, but the sooner they are removed from the tree after this point is arrived at, the better. Immature fruit never keeps so well as that which has ripened on the tree; and over-ripe fruit is liable to be bruised and to lose its flavour. The less fruit is handled in gathering, the better. Some of them, as peaches, nectarines, grapes, plums, &c., require to be treated with great delicacy, to prevent bruising and rubbing off the bloom. To accomplish this more effectually as well as to save labour the employment of a fruit gatherer, such as seen in the engraving, is recommended. The use of this implement is extremely simple, the net being held under the fruit desired to be gathered, and the cord being then pulled, the clippers sever the fruit at the stem, and it falls into the net below.

FRUIT PRESERVING.—Ripe fruits are commonly preserved in a fresh state by placing them in a cool dry situation on shelves, so that they do not touch each other; or by packing them in clean dry sand, sawdust, straw, bran, or any similar substance, with like care to preserve them from the action of air and moisture. An excellent plan, commonly adopted for dessert fruit, is to wrap each separately in a piece of clean dry paper, and to fill small wide-mouthed jars or boney-pots with them. The filled pots are then packed one upon another, as seen in the engraving, in a dry and cool place. The space between the pots may be advantageously filled up with plaster of Paris made into a paste with water. The joint is thus rendered air-tight, and the fruit will keep good for a long time.



The mouth of the top jar is covered with a slate. For use, the jars should be taken one at a time from the store-room as wanted, and the fruit exposed for a week or ten days in a warm dry room before being eaten, by which the flavour is much improved.

FRUIT STAINS, TO REMOVE.—Hold the portion of the article stained lightly over a tub or pan, and pour boiling water over it. This must be done before any soap is applied to it. As soon as a stain is made, it should be rubbed with common salt before it has time to dry; the salt will keep the part damp till the cloth is treated as above. For stains that are of long standing, rub the part on each side with yellow soap, then lay on a mixture of starch in cold water very thick; rub it well in, and expose the linen to the sun and air till the stain comes out. If not removed in two or three days, rub that off, and renew the process. When dry, it may be sprinkled with a little water.

FRUIT TREES.—The culture of fruit trees is liable to be interrupted by various causes. In the first place, insects are exceedingly troublesome, and commit great ravages on them; to prevent this, let a piece of India rubber be burnt over a gallipot, into which it will gradually drop in the condition of a thick viscid juice, which state

it will permanently retain. Having melted the India rubber, let a piece of cord or worsted be smeared with it and then tied several times round the trunk of the tree. The melted substance will prove so adhesive, that the insects will be prevented and generally captured in their attempt to pass over it. About threepennyworth of India rubber is sufficient for the protection of twenty ordinary sized fruit trees. *Frost*, which destroys so many fruit trees in the early spring, may have its effects neutralized by the following simple precaution:—Introduce a rope among the branches of the tree, and bring the end of it down so as to terminate in a bucket of water, and, should a slight frost take place in the night-time, the tree will not be in the least affected; the action of the frost being wholly confined to the bucket of water, on the surface of which a coat of ice will be formed.

To remedy moss on fruit trees:—Scrape the moss off and burn it. Confine the operation to the trunk and main branches, which you cannot easily hurt. A trowel is a good instrument, as it is handy to use, and takes off all loose bark as well. Having thus cleared the trees from the moss, apply the following composition, viz., a peck of fresh cow-droppings, half a peck of quicklime, half a pound of flower of sulphur, some wood-ashes, and a quarter of a pound of lamp-black. Mix the whole together with as much ley and soap-suds in a boiling state as will form the ingredients into a thick paint, and lay it on with a brush.

Fruit trees are frequently injured by the contact of iron nails: the corroding effects of the rust from which will not only destroy the particular branches where the nails are fastened, but will frequently destroy the whole tree. To avoid this evil, it requires care when fastening in the nails, to prevent them from coming in contact with the bark of the tree; perhaps the surest method of all to secure immunity against this mischief, is to use copper nails only, which are not affected by the weather, and therefore cannot communicate rust. The colour, size, and taste of fruit are peculiarly susceptible of improvement or deterioration, according to the nature of the soil they occupy. This is especially the case with the more delicate kinds of fruits, such as grapes, peaches, &c. For instance, if two black Hamburg grapes made from the cuttings of the same plant, shall be planted, the one in a dry, hazelly loam, and the other in a moist, black earth, the fruit of the one will be of a brown or grizzled colour, and the other of a dark crimson or black; and the latter will be more juicy and of a finer flavour than the former grown in the dry soil. The Chinese have an ingenious mode of propagating fruit trees, which might be practised with success in this country. They strip a ring of bark about an inch in width from a bearing branch, surround the place with a ball of rich loam bound fast to the branch with a piece of matting, over this they suspend a pot or horn with water, having a small hole in the bottom, to allow just sufficient water to drop on the ball of earth

to keep it constantly moist. The branch throws new roots into the earth just above the place where the ring of bark has been stripped off. The operation is performed in the spring, and the branch is sawed off and put into the ground at the fall of the leaf. The following year it will bear fruit.—See APPLE, CHERRY, ORCHARD, PEACH, PEAR, &c.

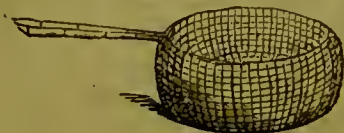
FRYING.—A very convenient mode of cookery to those who wish to unite comfort with economy. The fire used for frying should neither be too slack nor too fierce, but maintain throughout the process a steady and uniform brightness; and, above all, smoke should be particularly avoided. The frying fat, be it lard, oil, butter, or dripping, must not be stale, much less rancid. This fat, on being melted in the pan, must be brought to boiling point, or nearly so, before the materials to be fried are put in. The proper degree of heat may be ascertained by putting into the fat a few sprigs of parsley or a piece of bread, which, if they become crisp without acquiring a black colour, the fat will be hot enough for frying. The meat to be fried should be cut into chops or slices of not more than half or three-quarters of an inch in thickness, and slightly seasoned with salt and pepper. It is not necessary that the meat should be wholly immersed in the boiling fat; if it be immersed in part it will be sufficient. Fish is more difficult to fry than meat, on account of the softness of the fibre; it consequently requires a greater degree of attention. Before fish is put into the pan, it should be wiped thoroughly dry; it should also be brushed over with eggs and crumbs of bread, flour, or any farinaceous substance. Fish is best fried in oil. Fritters and sweet things must have either good butter, or good lard, or good oil. When the butter which is used for frying is clarified, it is not nearly so apt to burn. A rich brown colour is communicated to any fried substance by pressing it, when nearly cooked, against the bottom of the pan. Fat that has fried veal cutlets, lamb steaks, &c., may be used afterwards for fish, if allowed to settle, and poured clear from the sediment; but what is used for fish would spoil meat, though it will answer repeatedly for fish, especially of the same sort, if strained. All fries served dry are dished on a napkin. When served with gravy, as with cutlets, steaks, &c., pour the fat from the pan, and throw in a small slice of butter; stir to this a large teaspoonful of flour, brown it gently, and pour in by degrees a quarter of a pint of hot broth or water; shake the pan well round, add pepper, salt, and a little ketchup, or any other sauce that may be preferred, and pour it over the meat.

FRYING-PAN.—The ordinary frying-pan should be thick at the bottom, and lined throughout with enamel. It should be kept scrupulously clean, being washed with hot water immediately the process is finished, and thoroughly wiped before it is used again. It would be as well to have separate pans for fish and meat, to prevent an unpleasant flavour being imparted from previous fryings. The *sauté-pan* is a shallow

copper vessel, made sometimes with two handles, and sometimes with one, as in the engraving; it is used instead of a frying-



pan for small fillets or collops of meat, or aught else that requires but little cooking. It is more particularly convenient for tossing anything that is being cooked as soon as it is affected by the heat, and for this reason performs the process of frying with great nicety. A wire basket of the form illustrated is convenient for frying parsley and



other herbs. It must be placed in a pan well filled with fat, and lifted out quickly when the herbs are done; they may likewise be crushed in it over a clear fire, without any fat. A frying-pan has been recently introduced, fitted with wire linings that lift in and out of it; it is excellently adapted to save trouble, and very convenient for preparing dishes of a light and delicate nature. The articles to be cooked are arranged on the wire lining, and plunged together into the boiling fat, and well drained on it when they are lifted out.

FUCHSIA.—This plant is propagated by seed, when new varieties are desired, and by cuttings of the young wood for general purposes. To produce improved varieties by seed, it is a necessary condition that artificial impregnation has been made to take place between two existing varieties, possessing some or all of the properties which constitute perfection in the flower and plant. The seed should not be gathered until it is fully ripe; the pulp must then be cleared from it by washing, and when thoroughly dried in the sun, kept in a cool dry place till March, which is the best time for sowing. Prepare shallow pots or pans by draining them well, then fill them to within half an inch of the top, and press the soil pretty firmly down, leaving the surface quite smooth, and on this sow the seed thinly, and cover to the depth of a quarter of an inch. Place them in a pit at a moderate temperature, but near to the glass. When the young plants are from an inch to an inch and a half high, pot them off in 60-sized pots singly, and place them in a shallow pit, with an ordinary greenhouse temperature, shifting first into 48-sized pots, and afterwards into 32-sized, and allow them there to remain until they flower, when a selection of those having good points should be made, and the others thrown away. Those retained should be shifted in 24 or 16-sized pots, according to their strength. This constitutes their first season's growth. *Propa-*

gation by cuttings is best commenced in February and March; and should the plants from which they are to be taken be not already sufficiently excited, set them in a warm pit for a few days to forward them. The cuttings should be taken when about two inches long, cutting them off close to the old wood. Set them in pots filled with light sandy soil to within an inch and a half of their tops, upon which place an inch of flue



silver sand, in which insert the cuttings. Settle the sand about them by a gentle watering, and when dry, plunge them in a mild bottom heat; as the plants advance in growth shift them into larger pots. The soil best suited for this plant is a rich sandy one for very young plants; but as they attain strength, supply them with stronger



soil, until they are placed in their flowering pots, when a compost of strong yellow loam, containing about one-eighth of leaf-mould, and one-fourth of cow-droppings in a very advanced stage of decomposition should be used. Young plants will require

to have their tops pinched off from time to time, to ensure a sufficiency of branches for their proper formation. If they are to be grown as pyramids, which is the form mostly followed for show plants, one of the leading shoots should be removed as soon as the lower branches have extended to a few inches in length, and the other leader allowed to attain a foot or so more in height, when it should be topped also. This mode is applicable to both old and young plants, until the height desired be attained, the side shoots in the meantime being topped wherever they extend beyond the prescribed limits, and also when a thinness of branches is observable. The fuchsia is often trained as a standard, having a single stem and globular head; they are also sometimes trained as tall pyramids, covering a trellis-work of that form, and clothed with foliage and flowers from bottom to top; and when trained in the manner of creepers over parts of the roof, they have a very pretty effect. The fuchsia is easily protected during winter by being placed, on the approach of frost in autumn, under the greenhouse stage, in a dry shed, or even in a cellar, or anywhere where the frost is excluded. It is important, however, that they be kept dry and brought into gradual excitement, light, and air, in spring, at which time they should be taken out of their pots, and the old soil removed, and be re-potted in fresh compost, to carry them through the ensuing season.

FUEL.—Any combustible substance which is used for the production of heat constitutes a species of fuel; but the term is more properly limited to coal, coke, charcoal, wood, and a few other substances. The comparative value of fuel of different kinds of carbonaceous substances has been found by experiment to be thus:—

1lb. of charcoal wood melts	95lb. of ice.
" good coal	" 90 "
" coke	" 84 "
" wood	" 32 "
" peat	" 19 "

There are what are termed patent fuels, but it is doubtful whether they can compete on a large scale with those provided by the hand of nature ready for our use.—See **COAL, COKE, FIRES, &c.**

FULLER'S EARTH.—A species of clay which, upon being dug out of the earth, is thoroughly dried in ovens, and then thrown into cold water, where it soon falls to powder, and is purified by the process known as washing over. It is extensively used to extract oil and grease from cloth in the process of "fulling;" it forms an excellent filtering powder for oils, and is also useful for domestic purposes, to extract grease from floors, &c. It possesses cooling and healing properties for inflammations and excoriations, and is especially efficacious in relieving chafing of the skin.

FUMIGATION.—Vapour or gas extricated for the time being for the purpose of destroying contagious or noxious miasmata or effluvia, or to mask unpleasant odours, or to produce a medicinal action on those parts of the body with which it is brought in contact. Among the various substances

used as disinfecting fumigations, are included chlorine, nitrous acid, hydrochloric acid, sulphur, and vinegar. Of all common diseases, scarlet fever appears to be the one most requiring fumigation. For this purpose chlorine gas or heat should be employed. The infectious matters of certain diseases, especially scarlet fever, are either dissipated or destroyed at a heat slightly above that of boiling water. The fumes of strong vinegar or acetic acid, obtained by heating the liquid over a lamp or by sprinkling it on a hot shovel, yield very refreshing fumes, and prove generally efficacious. One of the most simple of fumigations is the following: Take muriatic acid and nitrous acid, of each half an ounce; put them into a quart bottle; add of manganese an ounce and a half; carry this about the room for a few minutes; a powerful smell will then be perceived, which will be sufficient; then let the bottle be closely stopped till the air begins to be offensive, when the same method must be repeated. This mixture will last for months. Fumigations, for the purpose of obviating or masking unpleasant odours in the sick chamber, must never be employed to the neglect of cleanliness and ventilation; for most of them, instead of purifying the air, actually render it less fit for respiration. The common practice of burning scented paper, pastilles, &c., so as to create an odoriferous smoke, is of this character. The fumes thus diffused through the atmosphere disguise unpleasant odours, but they accomplish nothing more. The infection remains not only unaltered by the diffusion of the most powerful aromatic vapours, but its deleterious properties are sometimes augmented by them.—See **CONTAGION, DISINFECTION, &c.**

FUMIGATION, IN HORTICULTURE.—The fumigation of the leaves of trees and plants is extensively practised, for the purpose of destroying insects. When this operation is performed, the leaves should be quite dry; for, when wet, many of the insects will secrete themselves under the leaves, and so escape. Tobacco is mostly used for fumigating trees, &c., and sometimes a little damp hay, old dried potherbs, or moss, are added to the tobacco, to increase the quantity and density of the smoke. The fumigating instrument ordinarily consists of a common hard-burned flowerpot of six or eight inches in diameter, into which a few live embers are put, and over them a handful of damp, unrolled, coarse tobacco. A small hole being cut in the side of the pot, near its bottom, the nozzle of a pair of common bellows is applied, and by blowing the air in, slow combustion takes place, accompanied by a large volume of smoke. Care must be taken that flames do not proceed from the pot, else the foliage might be injured. Where the fumigating process is carried on in a house or pit, and it can be conveniently covered during the operation with canvas, and this allowed to remain on all night, few of the insects will escape. In the morning the house may be freely ventilated, and the trees subjected to a copious syringing.

FUNDS, PUBLIC.—The designation given to the public funded debt, due by Government. Under this head are comprised a variety of channels for the investment of money, which are known collectively in the commercial world under the name of stock. The price of stock is influenced by a variety of circumstances. Whatever tends to increase or shake the public confidence in the stability of Government, tends at the same time to raise or lower the price of stock. They are also influenced by the state of the revenue; and more than all, by the facility of obtaining supplies of disposable capital, and the interest which may be realized upon loans to responsible persons. Persons having occasion to invest money in the funds usually employ a broker, who finds a seller of the stock wanted, and having agreed upon the price, delivers the particulars of the transfer to be made to a clerk in the proper office of the Bank of England, and fills up a receipt to be signed by the seller for the money paid. The transaction is completed in a short time, with very little trouble to the parties concerned. The broker's usual charge to the purchaser is $\frac{1}{2}$ per cent., or half-a-crown for every £100 of stock purchased. The dividends on the various funds are in the majority of cases payable half-yearly, but it is in the power of the stockholders to invest in such a manner as to draw their income quarterly. The personal attendance of the purchaser to receive his funds is not compulsory, and he may employ any person to receive the money on his behalf, by an instrument known as a power of attorney. Besides this legitimate operation of buying and selling, there is also what is termed *speculating in the funds*, which is frequently carried on by persons who have no property in the funds, as follows:—A. agrees to sell B. £1000 of bank stock, to be transferred in twenty days for £1200. A. has, in fact, no such stock; but if the price of the bank stock on the day appointed for the transfer should be 118 per cent., A. may purchase as much as will enable him to fulfil his bargain for £1180, and thus gain £20 by the transaction. On the contrary, if the price of bank stock be 125 per cent., he will lose £50. The transaction is then settled by A. paying to B., or receiving from him, the difference between the current price of the stock on the day appointed and the price bargained for.

FUNERAL CHARGES.—The charges for funerals are almost the last thing a person thinks about, because he has no occasion to do so until the unhappy necessity arrives, and then he is generally at a loss how to give orders for the funeral, so that it may be performed with becoming decency, and yet with economy. In such cases it would be as well to prevail upon some friend to make the necessary arrangements with a respectable undertaker, having at the same time a perfect understanding as to what is to be furnished, and the amount that is to be paid. Some undertakers take advantage of the recent grief of a bereaved person to import extravagant items into the funeral ceremony, and to charge a most exorbitant

sum for them. Others have "fixed charges," as they are called, but liable to a further addition for extras; and in many cases, where, for instance, a person has died poor, and left a large family, these cruel exactions fall upon a person just at the season that they are least able to be borne. Funerals are of two kinds, walking and carriage funerals. Walking funerals, except on extraordinary occasions, are, as a matter of course, much more economical of the two; but they are always associated with poverty or meanness. Carriage funerals are of various degrees, from a hearse and coach with two horses each, to a six-horsed hearse and ten or twelve mourning coaches, each with four horses. Within the last few years companies have been started in London for the burial of the dead. One in particular, the Necropolis Company, carries on its operations in connection with a great National Mausoleum of a thousand acres at Woking, in Surrey. Funeral trains leave London daily, and the company undertakes all the expenses of the funeral at charges varying from three guineas up to twenty.

FUNERALS, ETIQUETTE OF.—It is usual, when a death takes place, to communicate the event immediately, upon mourning note paper, to every principal member of the family, and to request them to communicate the same to the more remote relatives in their circle. A subsequent note should communicate information of the day and hour at which the funeral is fixed to take place. Special invitations to funerals are not considered requisite to be sent to near relatives; but to friends and acquaintances short invitations should be sent. Most persons who attend funerals will provide themselves with gloves; but it is well to have a dozen pairs, of assorted sizes, provided, in the case of accident. An arrangement can be made for those not used to be returned. Hat-bands and cloaks are provided by the undertaker. The degree of mourning to be worn must be regulated according to the age of the deceased and the relationship to the mourner. This will be best advised upon by the dressmaker, whilst the undertaker will regulate the degree of mourning to be displayed upon the carriages, horses, &c. In going to a funeral, the nearest relatives of the deceased occupy the carriages nearest the hearse. The same order prevails in returning. Only the relatives and most intimate friends of the family should return to the house after the funeral, and their stay should be as short as possible. In walking funerals it is considered a mark of respect for friends to become pall-bearers. In the funerals of young persons, the pall should be borne by their companions, wearing white gloves and love-ribbon. Visits of condolence should be paid within a week or fortnight after the funeral; by friends within the second week of the fortnight. Acquaintances should make inquiries and leave cards. All correspondence with families in mourning should be upon black-edged paper if from members of the family, or upon ordinary note-paper, but sealed with black, if from friends.

FUNGI.—A large natural tribe of plants of a very low organization, consisting chiefly of cellular tissue, sometimes intermixed with flocculent matter, and very rarely furnished with spiral vessels. They form, as it were, a link between the animal and vegetable kingdoms. They inhabit dead and decaying organic bodies, and are also a common pest to living plants, upon which they are parasites, and prey in the same manner as vermin and intestinal worms do upon animals. The eating of some kinds of fungi is liable to prove hurtful, and sometimes fatal; and as these cases arise from mistaking them for edible fungi, it will be as well to point out the characteristics of the fungi that are hurtful and poisonous. It appears, then, that most fungi which have a warty cap, more especially fragments of membrane adhering to their upper surface, are poisonous. Heavy fungi, which have an unpleasant odour, especially if they emerge from a vallon or bog, are also generally hurtful. Those which grow in woods and shady places are rarely esculent, but most are unwholesome; and if they are moist on the surface, they should be avoided. All those which grow in tufts or clusters from the trunks or stumps of trees, ought likewise to be shunned. A sure test of a poisonous fungus is an astringent styptic taste, and perhaps also a disagreeable but certainly pungent odour. Those, the substance of which becomes blue directly after they are cut, are invariably poisonous. The general rules laid down for distinguishing wholesome fungi are not so well founded; but the most simple and easy mode of testing the quality of field fungi is to introduce a silver spoon, or coin of that metal, or an onion into the vessel in which mushrooms are seething; if, on taking either of them out, they assume a bluish black, or dark discoloured appearance, there are certainly some dangerous fungi among them; if, on the other hand, the metal or onion, on being withdrawn from the liquor, wears its natural appearance, the fungi may be considered wholesome and innoxious. The symptoms indicating poisoning by fungi are nausea, purging, vomiting, and colic; in general accompanied with great depression of the pulse, cold extremities, clammy sweats, stupor, delirium, convulsions, sometimes paralysis. In such cases immediate means should be taken to clear the stomach, and a medical practitioner sent for, as the subsequent treatment must vary according to the symptoms in each individual case.

FUNNEL.—An article in the form of an inverted cone, for transfusing and filtering liquids. Funnels are made of glass, tin, copper, &c. The best, as being most easily kept clean for filtrations, are of glass. In ordinary filtration, when nothing more is required than to separate from the liquid any rough particles which may be floating in it, all that is necessary is to put a little cotton, wool, or tow into the funnel over the aperture of the spout or neck; but where transparency is wanted, the funnel must be lined with filtering paper of a single or double thickness, according to the neatness of the operation. The paper is fitted to the

funnel by twice doubling a piece larger than the funnel, and folding it up in plaits in such a way that one end may be completely pointed. The upper and uneven end is then rounded off with a pair of scissors, and the paper on being opened and put into the funnel, with the pointed part downwards may be adapted to it in every direction. The liquid to be filtered must be poured in gently and a little at a time, so that the sudden weight may not fracture the paper.—See **FILTRATION**.

FURNITURE.—In the selection of household furniture the general aim should be to procure good articles rather than cheap ones; and to obtain useful and substantial furniture, in preference to gay and tawdry articles, proportionately worthless. Regard should be paid to its suitability for the house and room it is to occupy, and also to the general harmony to be produced by design, form, colour, &c. Persons who are about to purchase furniture should be cautious in dealing with cheap advertising houses, and in every case they should be governed by their own taste, and the knowledge of what is actually required, instead of being led away by the plausible recommendations of the salesman. The durability of furniture depends in a great measure upon the manner in which it is used; if it is neglected, seldom cleaned, and left in rooms in which a fire is rarely lighted it will soon deteriorate both in appearance and value. Much damage is also done to furniture on occasions of removing, and when this takes place the owner of the furniture should superintend the operation, and see that the articles are carefully packed, and securely stowed away.—See **AUCTION, BEDROOM, BEDSTEAD, CARPETS, CHAIR, COUCH, CURTAINS, DRAWERS, DRAWING-ROOM, SOFA, TABLE, &c.**

FURNITURE POLISH.—To produce a polish on furniture several agents may be employed, according to the furniture operated upon, and the degree of brilliancy required to be produced. A *furniture cream* which will produce a brilliant surface in a few weeks may be made as follows: linseed oil, one pint; spirits of wine, one ounce; vinegar, one ounce; butter of antimony, half an ounce. A *furniture oil*, for obliterating the marks left by hot dishes, the stains of wet glasses, &c., is compounded in the following manner: alkanet root, one part; shell lac varnish, four parts; linseed oil, sixteen parts; spirits of turpentine, two parts; wax, two parts; mix, and let them stand for a week. Either of these are used by being applied with a piece of flannel, and then rubbed briskly with a soft cloth; if the effect desired is not produced by the first application, it must be repeated day after day until a successful result is attained. *Furniture paste* is better adapted for kitchen furniture than for any other. It is made by dissolving five parts of beeswax and one of resin, in enough spirits of turpentine to make them sufficiently thin to spread. This must be rubbed on to the surface with a cloth, and brushed rapidly and with considerable force, with a brush sold for the purpose, after which the surface is finished off with a fine

piece of baize, and though it feels somewhat sticky, yet it has a tolerably firm face.

FURS, PRESERVATION OF.—While in use, furs should be occasionally combed. When not wanted, dry them first, then let them cool, and mix among them bitter apples from the druggists, in small muslin bags, sewing them in several folds of linen, carefully turned in at the edges, and kept from damp. Camphor or pepper used in the same manner will have a similar effect.

FURZE.—A hardy evergreen shrub, indigenous to most parts of Great Britain, and growing abundantly on sandy or gravelly heaths and commons. It is chiefly used for fences, and as a cover for game, and shelter for young plantations. With common care, furze fences last for a very long period, but they require peculiar management to prevent the roots becoming exposed. Sowing in three tiers on a hank is perhaps the best mode, as it allows one tier to be kept low by the shears or bill, the second of higher growth, and the last to attain its natural stature. Furze possesses the merit of being highly nutritious as food for horses, sheep, and cattle; bruised in a mill and mixed with chopped hay or straw, it constitutes an excellent food for cows. Bruised furze is also an admirable substitute for hay for horses, but they should at the same time have oats and beans, to counteract the relaxing properties of the furze. Furze is also extensively used as fuel, for this purpose it will generally have attained its full growth in four years, and it ought not to be cut more frequently. This plant may be propagated by seed, sown from February to May. Young plants, or even slips planted in spring or October will grow readily. It should be cut the year after sowing, beginning in September or October; it will grow again until Christmas, and be fit for use till March.

FUSTIAN.—A species of coarse twilled cotton used as an article of apparel by the poorer classes. Fustians are either plain or twilled, and are sold sometimes as low as sixpence a yard. From their texture, colour, &c., they form durable and suitable clothing for mechanics and labourers.

G.

GAD-FLY.—An insect with spotted wings and a yellow breast, and having a long proboscis armed with a sharp dart. These flies are particularly troublesome to cattle by their sting. The horse-bot deposits its eggs on such parts of the horse as the animal can reach with his tongue. They are thus licked up and introduced into the stomach, are then hatched, and form bots. In Sweden, the grooms are accustomed to clean the mouths and the throats of the horses daily with a peculiar kind of brush, which prevents the larvæ of this insect getting into the stomach


of the animal. The ox-warble deposits its eggs on the back of oxen, causing great torture to the animal and much agitation to the beast if many attack it at once. The ovipositor of the insect pierces the skin on the back of the ox and then drops the eggs. At



the season of the year when gad-flies attack animals, their harness should be so managed as to allow them to be easily let loose, and they should also have free access to water.

GAIT.—See CALISTHENICS, DANCING, DEPORTMENT, &c.

GALETTE.—A favourite cake in France. It may be made rich and comparatively delicate, or quite common, by using more or less butter for it, and by augmenting or diminishing the size. Work lightly three-quarters of a pound of good butter into a pound of flour, add a large saltspoonful of salt, and make these into a paste with the yolks of a couple of eggs mixed with a teacupful of cream, or simply with water; roll this into a complete round, three-quarters of an inch thick; score it in small diamonds, brush yolk of eggs over the top, and bake it for about half an hour in a tolerably quick oven: it is usually eaten hot, but is served cold also.

 Flour, 1lb.; butter, $\frac{3}{4}$ lb.; salt, 1 saltspoonful; eggs, 2 yolks; cream, 1 teacupful.

GALL-NUT.—A kind of excrescence produced by a small insect which deposits its eggs in the tender shoots of a species of



oak, abundant in Asia Minor. When the maggot is hatched, it feeds on the morbid excrescence formed by the irritation of the deposited ovum on the surrounding parts, and ultimately, when perfected as the fly, it eats its way out of the nidus thus formed. Good gall-nuts are of a bluish green hue,

heavy, and breaking with a flinty fracture. When they are white, light, with a hole in one side, they are useless. Gall-nuts are employed in dyeing and in medicine.

GALLING, IN INVALIDS.—Persons who have been long confined in bed are liable to this complaint, to remedy which, beat the white of an egg to a strough froth, then drop in gradually whilst you are beating, two teaspoonfuls of spirits of wine. Put it into a bottle and apply occasionally with a feather.—See BED-SORES, CHAFING.

GALLON.—An English measure of capacity containing four quarts. By Act of Parliament the imperial gallon is to contain 10lb. avoirdupois of distilled water, weighed at the temperature of 62 degrees of Fahrenheit, and the barometer standing at 30 inches. This is equal to 277.274 cubic inches. The old English gallon, wine measure, contained 231 cubic inches, and held 8lb. avoirdupois, of pure water; ale and beer measure, 232 cubic inches, and held 10lb. 3½oz. avoirdupois, of water; and the gallon for corn, meal, &c., 272 cubic inches, containing 9lb. 13oz. of pure water. Hence the imperial gallon is about $\frac{1}{3}$ larger than the old wine gallon, and about $\frac{1}{60}$ less than the old ale gallon.

GALOPADE QUADRILLE.—1. Galopade. 2. Right and left, sides the same. 3. Set and turn hands, all eight. 4. Galopade. 5. Ladies chain, sides the same. 6. Set and turn partners, all eight. 7. Galopade. 8. Tiros, sides the same. 9. Set and turn partners, all eight. 10. Galopade. 11. Top lady and bottom gentleman advance and retire, the other six do the same. 12. Set and turn partners, all eight. 13. Galopade. 14. Four ladies advance and retire, gentlemen the same. 15. Double ladies chain. 16. Set and turn partners, all eight. 17. Galopade. 18. Poursette, sides the same. 19. Set and turn. 20. Galopade waltz.

GALVANISM.—A species of electrical phenomena, taking its name from Galvani, the discoverer. Its action is produced through the medium of two different metals, such as zinc and silver, tin and gold, &c. By this means the muscles of the body may be subjected to involuntary motion: for instance, if an experiment be made upon a dead rabbit, so that one of the metals be in contact with the brain, and the other with the muscles of the extremities, the whole body of the animal is strangely agitated. Similar experiments have been made upon the bodies of criminals shortly after execution, when the galvanic shock has made the legs, arms, &c. move as in life.—See *Dictionary of Useful Knowledge*, article GALVANISM.

GAMBOGE.—A yellow gum resin, much used as a pigment, and in medicine as a drastic and nauseating purge. In this latter capacity gamboge is highly dangerous when the stomach is in an irritable and inflammatory state; and under circumstances when taken in large quantities it is a violent poison. In obstinate constipation, in dropsies, in apoplexy, and in worms (especially tape worms) it is beneficial, either alone or taken with

other cathartics. *Dose*, one to five grains, made into pills or mixture, every four or six hours.

GAME HASH.—Take underdressed or half-roasted game, and after having stripped the skin from the thighs, wings, and breast, arrange the joints evenly in a clean stewpan, and keep them covered till wanted. Cut into cubes four ounces of the lean of an unboiled ham, and put it, with two ounces of butter, into a thick well-turned saucepan or stewpan, add three or four shalots minced, a carrot sliced, four cloves, two bay-leaves, a dozen peppercorns, one blade of mace, a small sprig of thyme, and two or three of parsley. Stew them over a gentle fire, stirring them frequently, until the sides of the saucepan appear of a reddish brown, then mix well with them a dessertspoonful of flour, and let it take a little colour. Next, add by degrees, making the sauce boil as each portion is thrown in, three-quarters of a pint of strong veal stock or gravy, and half a pint of sherry or Madeira; put in the bodies of the birds, well bruised, and boil them for from an hour to an hour and a half; strain, and clear the sauce from fat; pour it on the joints of game, heat them in it slowly; and when they are near the point of boiling, dish them immediately with sippets of toast arranged round the dish.

GAME PIE.—If the birds are small, keep them whole, if large, divide or quarter them. Season them highly, and put plenty of butter into the dish above and below them, or put a beef-steak into the bottom of the dish. Cover it with good puff paste and take care not to bake the pie too much. A half-pint of hot sauce made of melted butter, the juice of a lemon, and a glass of claret poured into the dish when to be served hot, is a great improvement. A very savoury raised game pie is made of partridges, pheasants, and other kinds of game, mixed; taking out the bones, and cutting up the flesh. It is then mixed with chopped liver, and placed underneath the raised crust; after which, when cold, the top is taken off, and a strong jelly made from the bones, and well spiced, then, after getting cold, mixed among the meat.

GAME SOUP.—Break the bones of cold cooked game, and cut the meat in pieces; boil the bones and meat in broth for an hour or more, then thicken the soup with the yolks of eggs and with boiled cream, and season according to taste. Care must be taken not to boil the soup after the eggs are mixed in it, or it will curdle.

GAME, TO CHOOSE.—See HARE, PART-RIDGE, PHEASANT, SNIPE, WOODCOCK, &c.

GAME, TO PRESERVE.—With few exceptions, game depends almost entirely, for the fine flavour and the tenderness of its flesh, on the time which it is allowed to hang before it is cooked, and it is never good when very fresh; but it does not follow that it should be sent to table in a really offensive state, for this is agreeable to few eaters, and repulsive to many. Game may be often rendered fit for eating when it is apparently spoiled, by carefully cleaning it, and washing it with vinegar and water. If it be suspected of any birds that they will not keep, draw,

crop, and pick them; then wash them in two or three waters, and rub them with salt; have in readiness a large saucpan of boiling water, and plunge them into it, one by one, drawing them up and down by the legs, so that the water may penetrate them thoroughly. Let them remain in the saucpan for five or six minutes, then hang them up in a cold place; when they are completely drained apply salt and pepper to the insides, and thoroughly wash them before they are dressed. By this means the most delicate birds may be preserved.

GAMEKEEPER.—The well appointed gamekeeper ought to be a man of varied information, and a general observer of human nature. He should be well versed in the habits and haunts of every sort of vermin destructive to game, and be indefatigable in devising means for catching and destroying them. He is not required to be a first-rate shot, but sufficiently skilled to protect the interests of his employer. He should be possessed of personal courage and determined will, as he may, perhaps, be occasionally brought into contact with poachers, who are generally the most desperate and lawless ruffians in the surrounding district. Gamekeepers form a sort of rural police in the execution of the game laws. They are authorized to seize all dogs, guns, nets, and other engines used for the taking or killing of game by uncertificated persons; but they must not shoot a dog following game within manor, unless used by an uncertificated person for the purpose of killing game. A gamekeeper may be discharged at pleasure, without previous notice, unless there be an express agreement to the contrary; and the occupation of any house he may be permitted to reside in is merely an incident in his vocation. It has been ruled that no gamekeeper has a right to carry and use fire-arms for the capture of poachers, or to fire at any poacher whatever; he may take any poacher into custody, but it is at his peril that he uses fire-arms.

GAME LAWS.—There are a number of laws in connection with game, the following being the most important: Any person that shall kill or take game, or use any dog, gun, or net, or other engine for these purposes, on a Sunday or Christmas Day, shall, on conviction, forfeit a sum not exceeding £5, with costs: any person taking or killing any *partridge* from the 1st of February to the 1st of September; or *pheasant* from the 1st of February to the 1st of October; or *black game* between the 10th of December and the 12th of August (or the 1st of September in the counties of Somerset, Devon, and in the New Forest); or *grouse* between the 10th of December and the 12th of August; or *bustard* between the 1st of March and the 1st of September, shall, on conviction, forfeit for every head of game a sum not exceeding 20s., with costs.

For any person to be entitled to kill game during the sporting season, it is necessary he should obtain a certificate from the clerk of the peace of the county or district where he resides, otherwise he will be liable to a penalty of £20, over and above the full duty

of £3 13s. 6d. Any person trespassing on land in the daytime, in pursuit of game, to forfeit a sum not exceeding £2, with costs; if one or more persons together commit such trespass, each to forfeit a sum not exceeding £5. The person having the right of killing the game, or the occupier of the land, or gamekeeper, or other person authorized by either of them, may require a person so found trespassing to quit the land forthwith, and to tell his name and abode; and in case of a refusal, or in case such person continue or return on the land, the party so requiring, and any person in his aid, may apprehend the offender, and take him before a justice, and such offender to forfeit a sum not exceeding £5, with costs; but the party arrested must be discharged, unless brought before a justice within twelve hours, in which case he may be proceeded against by summons or warrant. Where five or more persons together so trespassing, any of them being armed with a gun, shall, by violence or menace, prevent any authorized person from approaching them for the purpose of requiring them to quit the land, or to tell their names and abodes, any person so offending or aiding, to forfeit a sum not exceeding £5, in addition to any other penalty, with costs. *Daytime* to be deemed from one hour before sunrise to one hour after sunset. If any person be found by day or night on any land in search of game, and have in his possession any game which shall appear to have been recently killed, the person having the right of killing the game, or the occupier, or any gamekeeper, or servant, if either of them, may demand such game and seize it, if not immediately delivered up. As "game" only is mentioned, woodcocks, snipes, quails, landrails, or coneys, cannot be so seized. If any person, not having the right to kill game on any lands, nor permission from the person having such right, shall take out of the nest, or destroy the eggs of any bird or game, or of any swan, wild duck, teal, or widgeon, or shall knowingly have in his possession any such eggs so taken, such person, on conviction, shall forfeit a sum not exceeding 5s., with costs, for every egg. In leases granted subsequently to the Act of 1 & 2 Wm. IV., the tenant is entitled to the game upon the land in his occupation, unless restricted by the terms of his lease. Under all leases, however, granted previously to the passing of that Act, the landlord is entitled to the game, except in the three following cases: 1. Where the right of the game has been expressly granted to the tenant. 2. Where a fine has been paid upon the granting or renewal of the lease. 3. Where, in the case of a term for years, the lease has been granted for a term exceeding twenty-one years.

The laws for the *sale of game* are as follows: Certificated persons may sell game to licensed dealers. Every licensed person annually to obtain a certificate, on the payment of a duty of £2; penalty for any licensed person dealing in game before he has obtained his certificate, £20. If any licensed person is convicted of an offence against

the laws, his licence is void. An uncertificated person selling or offering game for sale, or a certificated person selling or offering game for sale to an unlicensed person, shall forfeit for every head of game a sum not exceeding £2, with costs. If any licensed dealer shall buy or obtain game from any person not authorized to sell it: or sell game not having a proper board affixed to his house with such notification inscribed on it; or fix such board to more than one house; or sell game at any other place than where the board is fixed; or if any unlicensed person shall, by fixing a board or exhibiting a certificate, pretend to be licensed, every such offender shall forfeit a sum not exceeding £10, with costs.

GAMING.—Where any cards, dice, balls, counters, tables, or other instruments of gaming, used in playing any unlawful game, shall be found in any house, room, or place suspected to be used as a common gaming-house, and entered under a warrant or order, or about the persons of those who shall be found therein, it shall be evidence, until the contrary be made appear, that such place is used as a common gaming-house, and that the persons found in the place where such have been discovered were playing therein, although no play was actually going on in the presence of the constable entering the same, such tables and instruments of gaming being forthwith destroyed. All contracts, whether by parole or in writing, by way of gaming or wagering, are null and void, and not recoverable in any court of law or equity; but this clause not to apply to any subscription or agreement towards any plate or prize to be awarded to the winner in any lawful game or pastime. All lotteries are declared public nuisances; if any person shall keep any office or place for lotteries, he shall forfeit £500. All private lotteries by tickets, cards, or dice, except backgammon, are prohibited, under a penalty of £200, by him that erects such lotteries, and £50 a time for the player. All raffles and other devices under the denomination of sales, which are equivalent to lotteries, are prohibited, under a heavy penalty by a great variety of statutes. All persons playing or betting in any open or public place, with any table or instrument of gaming, at any game or pretended game of chance, may be treated as vagrants. Betting-houses have recently been subjected to severe restrictions by the law. No house or office is to be kept or used for the purpose of betting, or for any assurance, promise, or agreement, expressed or implied, to pay or give any money or valuable thing on the event of any horse-race, fight, game, sport, or exercise; every house, office, room, or other place opened, kept, or used for such purposes, to be declared a common nuisance, and common gaming-house. Penalty on owner or occupier, a sum not exceeding £100, with costs; or on non-payment, to be committed to the House of Correction, with or without hard labour, for six months. Penalty on any owner or occupier of such house, office, &c., or of any person having the care or management thereof, or of conducting the business

of such places, or receiving money or other valuables pertaining to the aforesaid contingencies, £50, with costs, or on non-payment, three months imprisonment with or without hard labour. Justices may order the search of suspected houses, and the metropolitan police may enter and search suspected houses. One month's notice to prosecute must be given, and the prosecution commenced within three months after the offence.

GANGRENE, OR MORTIFICATION, is the death of any part, limb, or portion of the body, resulting from inflammation, the numbing effects of extreme cold, or the crushing influence of severe accidents. Gangrene is always indicated by a loss of warmth in the part, the diminution of pain, the discoloration and vesication of the cuticle, and the thin ichorous and fetid discharge, that directly afterwards takes place. At the same time a line of demarcation is observed between the living and the dead part, pointing out in unmistakable characters the boundaries of the disease.

Gangrene never attacks a limb or part of the body, while the circulation is strong and active, but always prefers a part where the circulation is weak and languid, and if in the leg, the disease begins in the most remote part, the toes, and extending up the limb, killing all to the centre as it advances, until it reaches a part of the member where the circulation is strong enough to allow of an adhesive inflammation, and an effort of nature to arrest the spread of the deadly enemy; as soon as this is the case, coagulable lymph is thrown out in a circle around the member, showing the separation of the living and the dead, and after a time, the dead limb falls off, effecting a natural amputation.

There is a form of gangrene that often rages in hospitals and jails, and carries the patients off like a plague, called *hospital gangrene*, but of this it is not requisite here to speak; the disease will be found treated of under its proper head.

Treatment.—To he of any effect the treatment of gangrene must commence early, and before the ichorous discharge takes place, and consists mainly in supporting the strength of the system, and rousing the flagging circulation, so as to enable the blood in the diseased part to resist the further progress of the gangrene. For this purpose, the temperature of the part must be raised by warm emollient poultices, and the internal exhibition of wine, bark, quinine, and opium, and, when necessary, an altered and sustaining diet; while as an occasional diffusible stimulant a dose of the following mixture every three or four hours. Take of

Carbonate of ammonia	1 scruple,
Aromatic confection	1 drachm,
Camphor water	6 ounces.

Mix, and add

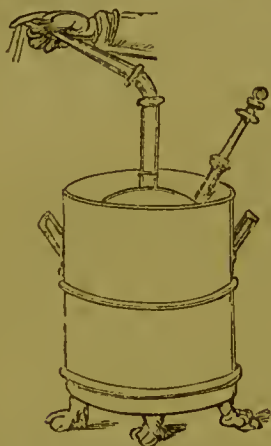
Aromatic tincture	3 drachms,
Compound tincture of bark	$\frac{1}{2}$ ounce,
Laudaum	1 drachm,
Sulphuric ether	$\frac{1}{2}$ drachm.

Mix, and give one tablespoonful every two, three, or four hours, according to the

urgency of the case, keeping the part in a state of emollient warmth, till reaction sets in and the entire exhibits returning vitality.

GARDEN.—See FLOWER GARDEN; KITCHEN GARDEN.

GARDEN ENGINE.—An implement designed for propelling water to a considerable distance, for the purposes of irrigation. The most desirable variety of this machine is that which is furnished with a sucking pipe, like the fire engine, by which means, if there be ponds or regular supplies by pipes or wells in a garden, the labour of carrying the water is avoided. By this construc-



tion the bore of the barrels may be formed in the lathe, and consequently made perfectly true; the piston-rods move exactly in the direction of the axis of the barrels; and therefore operate with the least possible friction.

GARDEN SEAT.—The pleasure of a garden is considerably enhanced by having



appropriate seats placed in the most favourable position. These seats are made either

of wood or iron, and are of every variety of design; it is more in keeping with the general character of the garden, however, that they should be as little formal as possible, and display somewhat of rusticity. That shown in the engraving is perhaps as well adapted for the purpose as any. Covered seats are also essential adjuncts; they are usually constructed from boards generally semi-octagonal, and placed so as to be open to the south. Sometimes they are portable, moving on wheels so as to be



placed in different positions, according to the hour of the day or the season of the year, which, in confined spots, is a desirable circumstance. Sometimes they turn on rollers, or on a central pivot, for the same object. In general they are opaque, but occasionally their sides are glazed, to admit the sun to the interior in winter.

GARDEN STAND.—This receptacle for



flowers and plants grown in the garden.

may be made of any design, according to fancy. The one shown in the engraving is suggestive of a rustic and inexpensive kind.

GARDEN SYRINGE.—Garden syringes are of different kinds; the common description is made of tinned iron, copper, or brass, and is generally about two feet in length and two inches in diameter. The implements shown in the engraving can instantly, by turning a pin, be applied so as to serve the purpose of four different caps or heads. A joint at the head enables the operator to turn it in any direction and to any angle. The pin by which these alterations are effected, is worked by a groove in the face of the rose; and by it a very fine shower, or a spreading stream, or a single jet from one opening, may be sent forth at pleasure. This is an elegant and useful instrument, more particularly for amateur gardeners, whether male or female. Macdougall's syringe is a very useful instrument for washing the under sides of the leaves of plants and shrubs; it also has the advantage of being converted into a straight syringe at pleasure.



GARDEN TABLE.—This, like all horticultural embellishments, should retain that



rustic character which brings a certain charm with it. Garden tables may be made

fixtures, or constructed so as to move; that depicted in the accompanying engraving being calculated for either condition.

GARDENER.—He who undertakes the profession of a gardener, takes upon himself a work of some importance, and which requires no small degree of knowledge, ingenuity, and exertion to perform well. There are few businesses which may not be learned in much less time than that of a gardener can possibly be. It is necessary that he should have had much practice in the various parts of horticulture, and that he should possess a genius and adroitness, fitting him for making experiments, and for getting him through difficulties that the existing circumstances of untoward seasons &c., may bring him into. He should possess a spirit of inquiry into the nature of plants and vegetation, and be acquainted with the resources of art that may be made available. The mode of growth, the pruning, the soil, the heat, and the moisture that suits particular plants, are not to be understood without a native taste, and close application of the mind. There are few things to be done in a garden which do not require a dexterity in operation, and a nicety in selecting the proper season for doing it. A gardener should be a sort of prophet, in foreseeing what will happen under certain circumstances, and wisely cautious to provide by the most reasonable means, against contingencies. A man cannot be a good gardener unless he be thoughtful, steady, and industrious; possessing a superior degree of sobriety and moral excellence, as well as genius, and knowledge adapted to his business. He should be modest in his manners and opinions, and ever ready to avail himself of the suggestions of others, when they are founded on experience and reason.

GARDENING.—As every person who is his own gardener is naturally anxious that the care and attention he bestows on his little plot of ground should be crowned with success, and that it should at all times present that appearance of neatness and order so pleasing to the eye, attention to the following general directions will go far to secure these advantages:—*Perform every operation at the proper season.* The natural, and therefore the best indications for the operation of sowing, reaping, transplanting, &c., are given by the plants themselves, or by the progress of the season as indicated by other plants. But there are artificial calendars or remembrancers, which serve to aid the memory, although they will not supply the place of a watchful and vigilant eye, and habits of attention, observation, reflection, and decision. *Perform every operation in the best manner.* This is to be acquired in part by practice, and partly also by reflection. For example, in digging over a piece of ground, it is a common practice with slovens to throw the weeds and stones on the dug ground, or on the adjoining alley or walk, with the intention of gathering them afterwards. A better way is to have a wheelbarrow, or, if that cannot be had, a large

basket, into which to put the weeds and extraneous matters, as they are taken out of the ground. *Complete every part of an operation as you proceed.* This is an essential point in garden operations; and though it cannot always be attended to, partly from the nature of the operation, partly from the weather, &c., yet the judicious gardener will keep it in view as much as possible. Suppose a compartment, or breadth of rows of potatoes, containing one-tenth of an acre, required to have the ground stirred by the Dutch hoe, the weeds raked off, and then the potatoes earthed-up with the forked hoe, the ordinary practice would be, first to hoe over the whole of the ground, then to rake it wholly over, and, lastly, to commence the operation of earthing-up. If the weather were certain of holding good for two days, this, on the principle of the division of labour, would certainly be somewhat the most economical mode. But supposing the weather dry, the part left hoed and not raked will for a time appear unfinished: and if rain should happen to fall in the night, the operation will be defeated in most soils. Better, therefore, to hoe, rake, and earth-up a small part at a time; so that, leave off where you will, that which is done will be complete. *Finish one job before you begin another.* This advice is trite, but it is of great importance; and there are few cases where it cannot be attended to. *In leaving off working at any job, leave your work and tools in an orderly manner.* Are you hoeing between rows, do not throw down your hoe blade upwards, or across the rows, and run off the nearest way to the walk. Lay your implement down parallel to the rows, with its face or blade to the ground; then walk regularly between one row to the alley, and along the alley to the path. In general, do not leave off in the middle of a row. Straighten your trenches in digging, because, independently of appearances, should a heavy rain of some days' duration intervene, the ground will have to be re-dug, and that will be more commodiously done with a straight than with a crooked, and consequently unequal, trench. *In passing to and from your work, or, on any occasion, keep a vigilant look out for weeds, decayed leaves, or any other deformities, and remove them, or some of them, in passing along.* Attend to this particularly on walks and edgings, and in passing through hot-houses, &c. In like manner take off insects, or leaves infested by them. Much in large as well as in small gardens may be effected by this sort of timely or preventive attention, which induces suitable habits for a young gardener, and occupies very little time. *In gathering a crop, or any part of a crop, remove at the same time the roots, leaves, stems, or whatever else belonging to the plants of which you have cropped the desired parts, is of no further use, or may appear slovenly, decaying, or offensive.* In cutting cabbage, lettuce, borecoles, &c., pull up the stem (with exceptions) and roots, and take them at once with the outside leaves to the compost-heap. Do the same with the haulm of potatoes, leaves of turnips, carrots, celery, &c.. Do not suffer the haulm of peas

and beans to remain a moment after the last gathering of the crop. *Cut down the stalks of all flowering plants, with the proper exceptions, the moment they have fully done flowering, unless seed is an object.* Cut off decayed roses, and all decaying double flowers, with their foot-stalks, the moment they begin to decay; and the same of single plants, when the seed is not wanted. From May to October the flower-garden and shrubbery ought to be looked over every day, as soon as the morning dews are evaporated, for this purpose and for gathering decayed leaves, tie up tall growing stems before they become straggling, &c. *Keep every part perfect in its kind.* Attend in spring and autumn to walls and buildings, and get them repaired, painted, and glazed where needed. Attend at all times to machines, implements, and tools, keeping them clean, sharp, and in perfect repair. See particularly that they are placed in their proper situations in the tool-house. House every implement, utensil, or machine not in use, both in winter and summer. Allow no blanks in edgings, rows, single specimens, drills, beds, &c. Keep edgings and hedges cut to the greatest nicety. Keep the shapes of wall trees filled with wood according to their kind, and let their training be in the first style of perfection. Keep all walks in perfect form, whether raised or flat, free from weeds, dry, and well rolled. *Finally, attend to personal habits and to cleanliness.* Never perform any operation without gloves on your hands that you can do with gloves on; even weeding is far more effectively and expeditiously performed by gloves the forefingers and thumbs of which terminate in wedge-like thimbles of steel, kept sharp. Most other operations may be performed with common gloves. Always use an iron head fastened to your shoe in digging; and generally wear a broad-brimmed light silk or straw hat, to serve both as a shelter from moisture and a shade from the sun. The labour of the feet will thus be lessened, the wear of the shoes spared, and rheumatism in the back and the neck avoided.—See DIGGING, HOEING, PLANTING, RAKING, WEEDING, &c.

Books: Loudon's *Encyclopædia*, 50s.; *Mc Intosh's Book of the Garden*, 50s.; *Johnson's Dictionary*, 10s. 6d.; *Jones's Receipt Book*, 2s. 6d.; *Loudon's Year Book*, 3s. 6d.; *Loudon's Self-Instructor*, 7s. 6d.; *Johns's Gardening for Children*, 2s. 6d.; *Glenny's Gardening for Cottagers*, 6d.; *Loudon's Gardening for Ladies*, 5s.; *Kemp's Handbook*, 2s.; *Downing's Landscape Gardening*, 18s.; *Doyle's Practical Gardening*, 3s. 6d.; *Paul's Villa Gardening*, 2s. 6d.; *Paxton's Flower-Garden*, 33s.; *Francis's Garden Favourites*, 6s.; *Formation of a Flower-Garden*, 3s. 6d. (*Grant & Griffiths*); *Lloyd's Fruit and Kitchen Garden*, 1s. 6d.; *Loudon's Flower-Garden Companion*, 7s.; *Milner's Garden, Grove, and Field*, 3s. 6d.; *Kemp's How to Lay Out a Small Garden*, 3s. 6d.; *Medwin's Garden Work for Every Day*, 1s. 6d.; *Burgess's Amateur Gardener*, 5s.; *Towers's Domestic Gardener*, 13s.; *Cobbett's English Gardener*, 6s.; *Johnson's Every Lady Her Own Gardener*, 2s.; *Mawe's Every Man His Own Gardener*, 6s.; *Taylor's Working Man's Gardener*, 1s.; *Gardener's Almanack* (annually), 1s.; *Loudon's Gardener's*

Calendar, 7s. 6d.; *Abercrombie's Pocket Journal*, 2s.; *Bridgeman's Young Assistant*, 12s.; *Rennie's Alphabet*, 1s. 6d.; *Ferris's Ornamental Gardening*, 6s. 6d.; *Hofland's Ornamental Gardening*, 3ls. 6d.; *Hayward's Geometrical Flower-beds*, 3s.

GARGLE.—A liquid medicine applied to the back part of the mouth or upper part of the throat. Gargles are applied by allowing a small mouthful to mix as much as possible over the affected part, by holding the head backwards, and breathing through it, by which means the liquid is agitated and its action promoted. Gargles are not to be swallowed. It often happens, however, that patients, either by accident or negligence, do swallow a certain quantity, notwithstanding the instructions given them to the contrary. Care should therefore be taken to avoid making gargles of such substances as may occasion unpleasant symptoms in small doses though they may not perhaps amount to poisoning. Gargles usually have for their basis either simple water, or milk, wine, or vinegar diluted with water, to which in both cases, sugar, honey, or syrup is generally added. The quantity used at a time under ordinary circumstances, may be about two-thirds of a wineglassful.—See MOUTH, AFFECTIONS OF, THROAT, AFFECTIONS OF, &c.

GARLIC.—A hardy perennial bulbous-rooted plant, growing naturally in Sicily and the south of France. It is cultivated for the sake of the bulb, which is used in



various kinds of dishes, being in general introduced only for a short period into the dish while cooking, and withdrawn when a sufficient degree of flavour has been communicated. It is propagated by planting the cloves or subdivisions of the bulb, and prefers a light dry soil, rich, but not recently manured. In February, March, or beginning of April, having some large full bulbs, divide them into separate cloves, and plant them singly in beds, in rows lengthwise. Set them from six inches to nine inches asunder, two or three inches deep, either in drills or in holes made with a blunt-ended dibble. In placing the cloves in drills, thrust

the bottom a little into the ground, and earth them over the proper depth. The plants will shortly appear; keep them clear of weeds. The bulbs will be full grown in July or the beginning of August. The maturity of the bulbs is discoverable by the leaves assuming a yellowish hue, when they may be taken up. Continue the stalky part of the leaves to each root; spread them in the sun to dry and harden, and then tie

them in bunches by the stalks and house them, to keep for use as wanted.

GARLIC PICKLE.—Steep a quarter of a pound of ginger in strong salt and water for five days, then cut it into slices and dry it in the sun, put it into a large stone jar with a gallon of white wine vinegar. Peel one pound of garlic, salt it well, and let it stand in the salt for three days; wipe it and dry it in the sun, then put it into the pickle; add a quarter of a pound of long pepper steeped in salt and water and well dried, one pound of mustard seed bruised, and a quarter of a pound of turmeric. Shake these ingredients well in the jar, and add anything that it is desirable to pickle as it comes into season, salting and drying them previously in the sun. When completed, the pickle should be kept for a year or two before it is used.

GARLIC SAUCE.—Peel the garlic, divide it into cloves, boil it for five minutes in water, then pour it off; add boiling water and boil it for five minutes longer; repeat the process a third and fourth time, then strain the garlic and send it to table in white sauce. The strength of the flavour may be either increased or diminished according to the length of time in boiling.

GARLIC VINEGAR.—Steep a small clove of garlic, a nutmeg bruised, and two or three cloves in a quart of vinegar for a week, shaking it well every day; strain, and bottle it for use.

GARNET.—A well-known mineral, consisting essentially of crystallised alumina, with silica, magnesia, iron, &c. The most valuable is the *precious garnet*, almandine or carbuncle, which is commonly a transparent, red, and beautiful mineral, either crystallised or in roundish grains. The *pyrope*, a blood-red variety, is perfectly transparent, and, in roundish or angular grains, is the next in value. The common garnet is not transparent like the preceding, and is most frequently of a dull red or blackish brown. The black garnet is a mineral found in volcanic rocks, and worked into necklaces at Naples.

GAROTTING.—A species of personal assault chiefly practised by footpads and highwaymen for the purpose of robbery. The manner in which this kind of attack is committed is as follows:—A person walking along unsuspectingly is suddenly rushed upon from behind, and a pair of hands are tightly clenched around his throat, which effectually prevents him from making any resistance, and shortly produces insensibility through suffocation; in this state the person attacked is robbed, and left lying in the road to recover in the best way he may, without having once caught sight of his assailant, and consequently being unable to identify him. These dastardly attacks reached to such an extent a few years since, that numerous plans were originated by which the person attacked could defend himself and repel the assailant. A knife with a

spring blade was made to fasten round the wrist, and with which the person assaulted was to stah the person behind until the hold was relinquished. A kind of collar was also nvented to be worn round the throat which was made of iron, and studded with spikes, the first touch of which would effectually compel the cowardly robber to desist in his attempt. Foot passengers were also cautioned to walk as far from the wall and as near to the road as possible, so as to render the opportunity of springing out from ambush less favourable. In connection with this and any other attacks of a similar character, persons should be cautious when walking along an unfrequented road at night-time, not to linger by the way, or suffer themselves to be led aside by any casual foot passenger they may meet.

GARTERS.—Care should be taken not to fasten this part of attire too tightly, as from this apparently trivial cause serious inconvenience and dangerous consequences have been known to arise; it is better to garter below the knee than above it, as the shin bone is better capable of resisting the pressure it is subjected to than the more fleshy part of the leg. Elastic garters are the most convenient to wear, as those that are tied are apt to become loose and fall, from the constant motion of the leg,

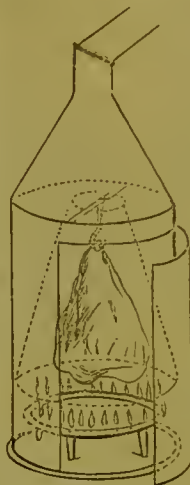
GAS COOKING.—The conducting of culinary operations through the medium of gas is an introduction of comparatively modern date, and one that is variously appreciated according to the taste and prejudices of those who have given it a trial. To boil with gas on a small scale is obviously extremely easy; nothing more is necessary than to



make the flame play against the bottom of the vessel set over it, as seen in the engraving. It will be best to have several jets of flame with separate stop-cocks, and the boiling may then be regulated by increasing or diminishing the number of jets. Stewing requires only less heat and consequently a smaller flame. Roasting by gas may be perfectly accomplished by an apparatus similar to that seen in the accompanying illustration. In this apparatus the meat is fixed upon a spike in the midst of a circle of little flames of gas, and a bright copper cone being brought over the whole, the current of heated air thus produced, together with the reflection of heat from the inside of the cone, are sufficient to effect the roasting.

The circle of flame is produced by causing the gas to come up through a pipe *a*, which is fixed on a table, and fills a horizontal circular ring, like that of a table lamp, having a number of small perforations on the top, through which the gas issues. The copper cone not here represented, having an orifice at the top, comes over the stays, and is suspended by a balance weight, so that the cook can let it down until it comes

below the flame, or raise it up higher, in



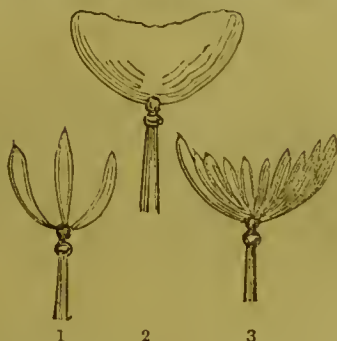
order to examine and view the meat. Beneath the circular tube giving out the flames a shallow dish is placed into which the gravy and melted fat fall, and then run out into another dish; the meat is then impaled on the spike in the centre. This apparatus is both clean and elegant, and might be employed in an ordinary sitting-room without entailing any great degree of trouble or inconvenience. But it is obvious that one apparatus is only calculated for things of one size; and that for things of various sizes several cones or even several apparatus may be requisite. Cooking

by gas has its advantages and its drawbacks; it certainly consumes less fuel and entails less trouble, and in summer time especially, is a convenient substitute for the fire that must otherwise be kept in. The great detriment, however, is, that articles cooked by gas, where the flame directly acts upon the article itself, are impregnated with the odour and taste of the gas, and consequently rendered extremely disagreeable to the palate.

GAS LIGHTING.—The success which has attended gas lighting, wherever it has been introduced, has now effected its adoption in every town and village of any importance, and causes it to be used not only for the purposes of commerce, but in private dwellings. The relative amount of illuminating power in comparison with the quantity of gas consumed, depends in a great measure on the kind of burner through which the flame is emitted. It is found by experiment that when an argand burner is constructed with holes of a proper size, and a proper distance from each other, with an internal tube so proportioned as to admit the exact quantity of air necessary for the perfect consumption of the gas, it gives more light than can be obtained from the same quantity of gas by any other method of burning.

Other burners in common use, are known by the names—single-jet, cocksput, union-jet or sau, fish-tail, and bat-wing. In the single-jet the gas issues from a single aperture; in the cocksput (1) from three apertures, as shown in the figure; in the union-jet (2), from a series of small holes, so that all the jets may unite laterally; in the bat-wing (3) from a slit instead of a series of holes; in the fish-tail, by making two jets cross each other and yet issue from the same hole; and the argand from a circle of small holes, the centre of which is an open space for the admission of air. The relative quality of light which they yield

from the combustion of similar quantities of gas is as follows: single-jet, 100; fish-tail, 140; bat-wing, 160; argand, 180. If the flame smoke in an argand it is evident that some adjustment is necessary, and the gas should either be lowered or the chimney contracted, until it gives a clear cylindrical flame of three or four inches in height. In the fish-tail burner if the flame flares or makes a noise in burning, the gas should

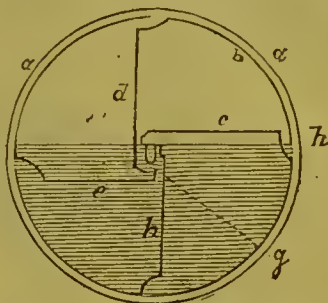


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also be lowered; but to diminish either much below these points, does not effect a saving of gas in proportion to the diminution of light. Hence the important conclusion, that it is more economical when the light is too strong to procure a smaller kind of burner, or where several lights are used to put out some of them altogether, than to lower the flame on the whole. Various calculations of the relative expense of gas-light compared with other lights have been made. Thus, when tallow candles are 9d. per pound, wax candles three times the price of tallow, train oil 2s. per gallon, and coal gas 9s. per 1000 cubic feet, it is computed that the relative expense will be wax, 100; tallow, 25; oil, 5; gas, 3. In addition to its greater economy, gas-light may also be pronounced safer than any other ordinary light. It produces no sparks, it cannot be carelessly placed in contact with bed curtains or substances easily ignited, and it requires scarcely any attention. It may be turned down in an instant to the most minute speck of flame, ready to be restored when necessary by the simple turning of the stopcock; and even when it escapes by the carelessness of an attendant, or a defect in the fittings, it at once indicates the accident to the whole household by the disagreeable smell which it occasions. From the large quantity which must be mixed with the air before it becomes explosive, it is scarcely possible that this accident could occur in any ordinary apartment. And its smell so well indicates its presence in cellars and other confined situations, where it may have escaped in quantity from the accidental breakage or leakage of a pipe, it is only by the grossest carelessness or negligence that a light will be suffered to approach it, before it has been allowed to escape by the free admission of air. In order to prevent accident or waste, the master of the house should, every night,

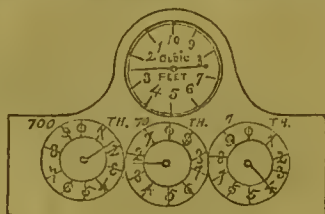
previously to retiring to rest, turn the gas off at the main with his own hands, and examine each stopcock, to see that it has been properly attended to.

GAS METER.—The water gas meter by which the consumer registers his consumption, may be thus illustrated. Within the



outer case *a a* more than half filled with water, there is a drum *b*, moving round upon two pivots, and divided into four compartments, *b, c, d, e*, by as many bent partitions, but enclosed at back and front by straight sides. The partitions are bent round, so as to form a central space *g*, and thus the gas can pass from one division into the next, and also escape into the outer case *a a*, by slits in the rim of the drum. The gas enters at the back of the outer case by a pipe, which proceeds into the central space, where it turns up and rises a little above the level of the water. One of the pivots on which the drum works is fixed in the bend of this tube. A peg on one of the straight sides at the back is the other pivot, and carries a toothed wheel. As one partition gets filled with gas, it becomes lighter and rises, thereby causing the drum to perform a portion of a revolution. In the accompanying engraving, the pipe *g* is pouring gas into the division in the direction of the arrow. As the gas accumulates in it, it gradually lifts this division out of the water and brings the compartment *b e* into the same position. As this gets filled and ascends, the compartment *d* comes round; then *c b*, which being filled, and rising, completes one whole revolution. Now, it will be seen, that as each compartment rises above the level of the water, the gas contained in it passes out through the slit into the outer case, and from that along a tube at the top of the case for supplying the burner. Thus, while one partition is rising, another is being brought under the water; and while the one is parting with its gas the other is being filled, and so on. A toothed wheel gives motion to a train of wheels, adjusted so as to represent the quantity of gas consumed on a dial. This dial consists of hands moving round circles which register the number of cubic feet of gas consumed, in units, tens, hundreds, thousands, &c. The top circle registers units; the right circle hundreds; that is, the motion of the hand from *q* to 1 shows

that 100 cubic feet of gas have passed through the meter; and of course a complete revolution of this hand indicates ten times the quantity, or 1000 cubic feet. So the motion of the hand of the centre circle from 0 to 1 indicates 1000 feet; and a complete revolution 10,000 feet. The motion of the hand from 0 to 1 of the left-hand circle indicates 10,000, and a complete revolution 100,000 cubic feet. In reading off the numbers on the circles, we must take the



number at which the hand is pointing, or the *lower* of the two numbers that the hand may happen to be between. If, for example, the hand be anywhere between 5 and 6 on any one of the circles, 5 is to be taken. Commencing, then, at the left-hand, the hand is between 1 and 2: write down

10,000

2,000 for the middle circle

300 for the right-hand circle

12,300

Now, supposing that in taking the register three months before, the quantity had been set down as 9100; then subtracting this from 12,300, gives 3200 cubic feet of gas as the consumption for three months. The top or units dial is not used in registering: its use is to indicate to the collector, and also to the consumer, that the meter is acting properly; for they could not, of course, wait while 100 feet were being registered. Gas consumers should not lose sight of their meters, but from time to time, take an account of the gas burned so as to ascertain that the amount consumed is in accordance with the time it extends over, and also if it bears the same ratio as the gas burned in former periods. For the want of this care, consumers have frequently to pay for gas which they do not consume, through some defect in the meter. Gas meters are usually supplied and fixed by gas companies, and a small sum charged for their annual use.

G A T E.—The general principles upon which gates for fields and farms should be made, are as follows: they should always be made to fold back upon a fence, to open beyond the square, and not to shut off themselves. When they shut off themselves and are not far enough pushed back when opened, they are apt to catch the wheel of a cart when passing, and to be broken, or the post snapped asunder by the concussion; and as self-shutting gates are often left unfastened by people who pass through them, requiring greater attention than is

usually bestowed on such matters, the stock, principally young horses, which seem to take a delight in loitering about the gates, would then escape from the field. A gate should be made of sufficient height, so that horses and large cattle, when pushing against it, cannot break it. This is a precaution which is very frequently neglected, so that however strong a gate may be, the back part coming in contact with that part of a horse's chest where the collar usually goes, he without inconvenience, leans his weight against the opposing bar and breaks it; but if it were a few inches higher it would press against the horse's neck and windpipe, and he could thus make no impression on it. The best description of gate, both as regards convenience and durability, is that commonly used in Suffolk. In this gate, suspending irons are used instead of the ordinary braces, by which means the gate is prevented from one of the most common defects, dropping at the head. These irons are made in one piece, go on both sides of the gate, are riveted through the back and ledges with thick leaden or zinc collars between the iron and the wood; clasp round the back head, to form the upper hanging iron without being welded into a close eye, by which the gate would be confined, and at the lower ledge turn up to form one of the pairs of iron uprights. The second pair of uprights are also riveted through the ledges with thick small leaden collars, to prevent the iron from injuring the wood; and with a thin piece of zinc for the same reason, between the iron and the back of the gates. A gate made with sawn young fir trees, and having the advantage of such irons, will last a great many years. If cut out of good timber, three-inch planks nine feet long, there is not an inch of stuff wasted. The eye for the book in the lower iron is made oblong, to give the gate room to rise. The only fastenings used are chains, eighteen inches long, from near the top of the post to a hook near the middle of the fore head, which takes the whole weight off that end of the gate, and allows of it giving a little way outward. The *most convenient position* for a gate, for easy entrance into and egress from a field, is at the end of one or both head ridges, which are always regarded as the boundaries of fields.

GATE FASTENER.—Many contrivances are made use of to keep gates fastened; but of all these the following will be found the most simple and efficacious. An iron loop is driven into the middle cross rail of the gate, and a rope cast over the branch of a neighbouring tree. A rough pole may then be fitted at one end with a staple long enough to work in the iron loop of the gate without jumping out when jarred. To this pole the rope is fixed at such a distance from the other end that when suspended and the staple is dropped into the iron loop, the rope and pole will remain oblique when the gate is shut. This will be explained by the accompanying sketch, the fig. A showing especially how the staple and iron loop fit together. When the gate is opened the pole is at the same time pushed back, but as

soon as a person has passed through, the weight of the pole acting upon the middle



of the gate closes it again, and as the pole sways freely on the rope, this can never fail to happen.

GATE OPENER.—Any plan by which gates may be opened to admit vehicles to pass without obliging the driver to alight, must prove a great convenience. A contrivance by which this may be effected is designed as follows. On the approach of the vehicle the gate opens apparently by its own volition, and closes again after the carriage has passed through without any apparent cause. The effect is produced by small plates let into the ground at short distances from the gate, which, when the wheels of the vehicle roll over them, descend like a weighing machine, and act upon certain levers concealed under ground. By means of these levers a toothed wheel is made to revolve and to turn a toothed pinion affixed to the swinging post or axle of the gate, and thus to throw it open or close it.

GAUFFERING.—A process somewhat similar to plaiting and crimping, differing only from the latter, by having the grooves much larger and less regular. For this operation gauffering machines are commonly used, but the same effect may be produced by the following simple means:—Procure a board about a yard long and fifteen or eighteen inches wide; cover it with flannel, and fasten two tapes lengthwise, leaving a quarter of a yard between them; then pin the next to the flannel at one end, and place a straw over the tapes (between which the net is lying), and under the net; the next straw is laid under the tapes and over the net, and so on alternately, taking care that the upper straws are put close to each other upon the under ones, forming two layers of straw. When all the net is folded, dip a coarse cloth in water, and wring it as dry as you can, without splitting the straws; remove the cloth and place the board before the fire for half an hour, when the upper straws may be drawn out, and cotton run in

to secure it; after which, the remaining straws may be taken away, and the work is then complete. Some persons hold the board over the steam of a kettle for some time, and then dry it before the fire, in preference to ironing; others sprinkle it with starch, gum, or rice water, before ironing.

GAZOGENE.—The gazogene consists of two glass vessels; one of these has a metal tube, which fits into its



neck so as to be water-tight at the joint, and rises nearly to the top of the upper vessel from which, also, is a tap. In order to use it, the two powders (bicarbonate of soda and tartaric acid) are placed *dry* in the lower vessel, by removing the metal tube, which is then replaced and firmly pushed down into its socket. The upper vessel, being now turned with its mouth upwards, is filled to the top of the glass part with the water or other fluid to be rendered effervescent. After this, the lower part, as previously charged, is turned down into the vessel, and the two while in

this position are securely screwed together. When this is done, they are turned up to their original position, when a little of the fluid immediately flows over the top of the tube, and runs down into the vessel, where it mixes with the two powders, and causes the one to decompose the other, and thus liberate the carbonic acid gas, which is done with considerable force, so as to rise through the tube, and mingle with the fluid in the vessel, which thus becomes charged, and when let out by the tap is highly effervescent. This machine, if well constructed, and especially if gilt, will produce soda-water, lemonade, orangeade, ginger-beer, currant-water, or any other flavoured beverage, in a state of effervescence.

GEESE.—The form of the common goose is too well known to need description. Its colour is usually white and grey mixed, sometimes quite white, especially among the males. The mixed or parti-coloured is supposed to be less vagrant in its habits than the gray goose, and the feathers are more valuable; but the latter is more prolific, and produces the finest young ones. The gander should be a pure white, and of a large size. A single breeding stock consists of a gander and five geese; these are enough for an ordinary farm-yard, as they will produce forty or fifty young during the season. They may be lodged in almost any common place or out-house; they are, however, partial to a clean and dry spot in which to pass the night; and a constant supply of fresh straw preserves them from vermin, and improves their health and condition. It is always

better that there should be a pond in the vicinity where geese are kept, to give them an opportunity of indulging in a natural liking for water, but this is not absolutely necessary. But when this is wanting, an abundant supply of clean water must be constantly supplied. The expense of feeding geese is very trifling, as they generally manage to procure the greater part of their food from the commons, lanes, and other places where they are in the habit of straying. The period of commencing laying is usually the beginning of February. An egg is laid every alternate day, or if the weather be warm, two in three days, until ten or




twelve are produced. If the eggs are removed as soon as they are deposited in the nest, the goose will continue to lay for a much longer period, or until there are from twenty to thirty eggs; and at harvest-time she will begin to lay again, and probably produce as many more. The laying of geese may be accelerated by feeding them well all through the winter upon good solid corn; in January other stimulating food should be given in addition, such as bread or pollard soaked in beer, barley-meal in milk, malt, fresh grains, or Indian corn, either whole or ground. The time of laying is known by the goose carrying straws to form her nest; when this is seen, a nest of straw, lined with soft hay, should be prepared in the place intended for her to deposit her eggs. Nettles strewed around are said to attract them to any desired spot, as they are fond of the smell. Food and water must be placed near the nest, and when one egg is laid, she will continue to lay in the same place. The number of eggs usually allowed is eleven, but there is no reason why more should not be given them, according as the goose may be able to cover them. If the goose should want to set after laying only a few eggs, she must be prevented until a sufficient number are ready for her. Where many geese are kept, the desired number may be made up from the nests of others. While the goose is sitting, food and water should be placed near her nest, that she may not be compelled to quit it any length of time, and thereby

suffer the eggs to become cold and addled. About the thirtieth day the eggs will begin to be hatched; as the young come forth irregularly, those first produced must be removed, if the goose will allow it, kept warm before a fire, and replaced with the parent when the whole are hatched. The goslings should not be fed for twelve hours. If the weather be warm, they, after two days, should be turned out into the open air, care being taken that they do not go out too early in the morning, that they do not remain out too late, and that they be well sheltered from the wind and rain. They must also be prevented from going into the water until they are a week or ten days old, as they are very liable to the cramp. Their food may be either warm bread and milk, or thin barley-meal and water, curdled milk with lettuce leaves, and the plant called goosegrass, which grows so plentifully in early spring, and of which they are very fond. After a few days they may be allowed to go abroad with the parent, but care must be taken to destroy all nightshade, hemlock, and henbane that may be growing near their haunts, as they will eat these noxious plants and poison themselves. Geese are subject to diarrhoea: for this complaint hot ale, in which acorns, quinces, or hark has been boiled, may be given them. When they are attacked by giddiness, the remedy is bleeding, by pricking with a needle a vein which is under the skin that separates the claws. Insects get into the ears and nostrils of goslings, and are a dreadful annoyance to them; in such a case give them barley at the bottom of a pan of water, so that when the goslings plunge in their heads to eat the barley, the insects will be destroyed or fly away.—Book: *Doyle's Rural Economy*, 2s.

GELATINE.—In chemistry the name given to an abundant proximate principle in animals. It is confined to the solid parts of the body, such as tendons, ligaments, cartilages, and bones, and exists nearly pure in the skin; but it is not contained in any healthy animal fluid. Its leading character is the formation of a tremulous jelly, when its solution in boiling water cools, and it may be repeatedly liquefied, and again gelatinized by the alternate application of heat and cold. Gelatine, as an article of food, is not so nutritious as is generally supposed.

GENEVA ROLLS.—Break down into very small particles three ounces of butter with two pounds of flour, add a little salt, and set the sponge with a tablespoonful of solid yeast, mixed with a pint of new milk. Let it rise for one hour, then stir to a couple of well-beaten eggs as much hot milk as will render them lukewarm, and wet the rolls with them, to lighten the dough; leave it from half to three-quarters of an hour; mould it into small rolls, brush them with beaten yolk of egg, and bake them for twenty minutes or half an hour. The addition of six ounces of sugar, three of butter, half a pound of currants, the grated rind of a large lemon, and two ounces of candied orange-peel, will convert these into excellent rolls.

 Flour, 2lbs.; butter, 3ozs.; yeast, 1 tablespoonful; milk, 1 pint; eggs, 2; sugar, 6ozs.; butter, 3ozs.; currants, $\frac{1}{2}$ lb.; lemon, rind of 1; candied orange-peel, 2ozs.

GENTIAN.—A plant growing in great abundance in Switzerland and Germany; its root is highly esteemed as one of the most powerful and most useful of bitter tonics. It is a remedy very serviceable in indigestion, general debility, and tedious convalescence. It possesses the advantage of not being decomposed by acids, alkalies, or the other metallic salts of iron, zinc, or silver, and is therefore a useful vehicle for their administration. The dose of the infusion of gentian is two tablespoonfuls twice a day. Of the extract ten grains to half a drachm, twice or thrice a day; of the tincture, a teaspoonful in a wineglassful of cold water.

GENTLEMAN.—The term gentleman is considered an inferior designation to that of esquire; but what is the generic difference between the two, writers are not agreed. According to Blackstone, it is a student at law, or in the university, one who professes the liberal sciences, or can live idly, without manual labour, and bear the charge and countenance of a gentleman. In the case of an appointment of a charitable allowance, a court of equity directed the master to include in the definition of gentleman "magistrates, esquires, members of the three learned professions, graduates of the universities, attorneys, surgeons, apothecaries, and the like." The social significance of this term is capable of a wider construction, a person being considered such whose actions are governed by correct moral principle, or one whose language, manners, dress, and general outward bearing, are somewhat removed above the labouring classes.

GEOGRAPHY.—Books: *Butler's Geography*, 2s. 6d.; *Pinnock's*, 6d.; *Useful Geography*, 3d.; *Rougat's Amusing Geography*, 1s. 6d.; *Baird's Ancient Geography*, 4s.; *Hildyard's Manual*, 2s. 6d.; *Putz's Medieval*, 4s. 6d.; *Pinnock's Modern*, 5s. 6d.; *Ewan's Australian*, 3s.; *Baker's Bible*, 2s. 6d.; *Hughes's British*, 2s.; *Gibbon's Catechism*, 9d.; *Hiley's Child's Geography*, 9d.; *Pettit's Classical*, 6s.; *Mangnall's Compendium*, 7s. 6d.; *Evans's Concise*, 2s. 6d.; *Knight's Cyclopædia*, 10s.; *Wooley's Descriptive*, 20s.; *Johnston's Dictionary*, 36s.; *Smith's Classical Dictionary*, 15s.; *Blackie's General Dictionary*, 95s.; *Butler's Easy Guide*, 1s. 6d.; *Hutchinson's Lessons*, 1s.; *Cobbin's Elements*, 1s. 6d.; *Gibson's Etymological*, 4s. 6d.; *Gaskin's European*, 1s. 6d.; *Guy's First Book*, 1s.; *Mrs. Stowe's Geography for Children*, 4s. 6d.; *Gilbert's Geography for Families and Schools*, 3s. 6d.; *Geography for the Use of the Blind*, 5s.; *Sullivan's Geography Generalized*, 2s.; *Goldsmith's Grammar*, 3s. 6d.; *Boardman's Historical*, 1s. 6d.; *Butler's Introduction*, 2s. 6d.; *Mrs. Slater's Lessons*, 6s.; *Guy's Illustrated*, 3s.; *Heale's Geography for Military Students*, 4s. 6d.; *Hughes's Mathematical Geography*, 5s.; *Groves's Modern*, 6s.; *Steill's Pictorial*, 2s. 6d.; *Dower's Political*, 21s. 6d.; *Hiley's Progressive*, 2s.; *Somerville's*

Physical, 12s.; *Wittich's Curiosities*, 2s.; *Woodbridge's Rudiments*, 3s. 6d.; *Sane's Sacred*, 5s.; *Wilson's Simplified*, 2s.; *Milner's Universal*, 5s.

Atlases.—*People's Atlas*, 21s.; *Butler's Ancient*, 4s. 6d.; *Butler's Ancient and Modern*, 2s. 6d.; *Philip's*, 10s. 6d.; *Findlay's Comparative*, 31s. 6d.; *Hughes's Constructive*, 3s. 6d.; *Judd's Indestructible*, 3s.; *Parlour Atlas*, 6s. 6d.; *Johnston's Atlas of Physical Geography*, 12s. 6d.

Use of the Globes.—*Easy Lessons on the Terrestrial Globe*, 2s.; *Butler's Exercises on the Globes*, 2s. 6d.; *Butler's Geography of the Globes*, 4s. 6d.; *Molyneux's Knowledge of the Globes*, 3s.; *Howe's Lessons*, 6s.; *Bruce on the Use of*, 2s. 6d.; *Keith on the Use of*, 1s.; *Pinnock on the Use of*, 3s.; *De Morgan's Treatise*, 5s.

GEOLOGY.—Books: *Chambers's Course*, 2s. 6d.; *Richardson's*, 5s.; *Buckland's Geology and Mineralogy*, 35s.; *Nicol's Catechism*, 9d.; *Gibson's Certainties*, 10s. 6d.; *Hamble's Dictionary*, 6s.; *Ansted's Elementary*, 12s.; *Hitchcock's Elements*, 10s.; *Mantell's First Lessons*, 5s.; *Richardson's Geology for Beginners*, 10s. 6d.; *Phillips's Guide*, 6d.; *Tyass's Handbook*, 1s.; *De la Beche's How to Observe*, 10s. 6d.; *Bakewell's Introduction*, 21s.; *Mantell's Wonders*, 18s.; *McIntosh's Key*, 6d.; *McGillivray*, 4s. 6d.; *Jamieson's Mechanical*, 2s.; *Macfarlane's Modern*, 2s. 6d.; *Cockburn's New System*, 3s. 6d.; *Sullivan's Modern and Scripture*, 3s.; *Brande's Outlines*, 7s.; *Zornlin's Outlines*, 10d.; *Burr's Practical*, 6s. 6d.; *Zornlin's Recreations*, 4s. 6d.; *Orr's Rudiments*, 2s. 6d.; *Page's Text Book*, 1s. 6d.; *Portlock's Treatise*, 1s. 6d.; *Guinness's Views*, 6s.; *Lyell's Principles*, 18s.; *Schoedler's Physics*, 7s. 6d.

GEOMETRY.—Books: *Darley's Companion*, 4s. 6d.; *Minifie's Drawing*, 21s.; *Bland's Problems*, 10s. 6d.; *Colenso's Problems, with Key*, 3s. 6d.; *Gaskin's Cambridge Solutions*, 12s.; *Cooley's Proportions*, 3s. 6d.; *Wallace's Theorems*, 6s.; *Church's Analytical*, 8s. 6d.; *Fisher's Elements*, 3s.; *Keith's Elements*, 10s. 6d.; *Playfair's Elements*, 6s. 6d.; *Kirkman's Lessons*, 1s. 6d.; *Lardner's Euclid*, 7s.; *Thomson's Euclid*, 5s.; *Duncan's Plane Geometry*, 2s. 6d.; *Bennett's Practical*, 16s.; *Dallas's Practical*, 7s. 6d.; *Ritchie's Principles*, 1s. 6d.; *Darley's System*, 4s. 6d.; *Lardner's Treatise*, 4s. 6d.; *Beil's Key*, 2s.; *Newman's Elementary Difficulties*, 5s.; *Hall's Descriptive*, 6s. 6d.; *Christie's Course*, 10s.

GERANIUM.—A genus of beautiful plants, indigenous to the south of Africa. The ordinary mode of continuing each species and variety is by cuttings, but almost all the sorts produce ripe seeds in this country, by which they may be multiplied, and also new varieties produced. The seed, if ripe before midsummer, may be sown as soon as gathered in pots of light rich earth, and placed in a gentle hot-bed and shaded. The plants will soon come up, and if when they show two upper leaves they are transplanted singly into pots, and kept under a cold frame, several of them will flower in the following spring and summer. No plant grows more readily by cuttings than the shrubby species of this family; the cuttings may be taken off at a joint when the wood is beginning to ripen; laid in the shade for an hour or two until the wound heals, and then planted in sandy loam, and placed in a gentle heat. The harder sorts, such as the

common scarlet geranium, will strike in the open air, or in any shaded situation, without being covered with a glass. Cuttings of the roots of such sorts strike readily; a small portion of the root being left above the ground. The culture of the geranium requires a light rich soil; they grow well in equal parts of sandy loam and manure in an advanced stage of decomposition; or they will grow in leaf-mould and sand, unmixed with any other material. As most species are rapid growers, the pots require to be examined in spring and autumn, and the roots and top reduced or the plant shifted into a larger pot. In general, the shrubby sorts should be kept low and bushy by pruning; but when they are allowed to grow tall and straggling, they are unsightly and do not flower well. When an extensive collection is kept, it is desirable to devote a house entirely to their culture; in this, the roof should be so constructed, as to admit as much light as possible; the stage should be near the glass, and there should be ample means of giving air and heat. Most of the species require rather more heat during the winter than evergreen woody exotics from the same climates, otherwise they are apt to lose their leaves, and rot at the points of the shoots; to prevent this, heat should be given in the day-time and the air admitted, and whenever any leaf begins to decay, it should be removed. The hardier species, like other greenhouse plants, are generally placed in the open air from May to September, but, as the flowers are much injured by heavy rains and winds, the more delicate sorts, and all those intended to flower in the best manner, should be kept in the house with abundance of air night and day. In warm situations it is customary to plant the scarlet geranium and other free-growing sorts, in the borders of the flower-garden or shrubbery; these, when attacked by frost, may be either protected where they stand, by a liberal supply of litter and mats, or they may be removed into single pots, and placed in the dry part of the greenhouse till the following spring.

GERMAN CAKE.—Mix well together a pound and a half of finely powdered loaf sugar, two pounds of well-dried flour, and an ounce of caraway seeds; make it into a stiff paste, with the whites of three eggs beaten in a quarter of a pint of milk; roll it out very thin, cut it into shapes, prick, and bake upon buttered tins.

☞ Loaf sugar, $\frac{1}{2}$ lb.; flour, 2 lbs.; caraway seeds, 1 oz.; eggs, 3 whites; milk, $\frac{1}{2}$ pint.

GERMAN LANGUAGE.—The acquisition of this language is next in point of importance to the French language for social and commercial purposes; while to the student it opens up a field of knowledge in every branch of literature and science, unqualified in the language of any other part of the world. Books: *Flügel's Dictionary*, 2s.; *Etwell's Dictionary*, 5s.; *Marcus's Vocabulary*, 3s. 6d.; *Ahn's Child's Book*, 3s.; *Arnold's First Book*, 5s. 6d.; *Ollendorff's Introductory*, 5s.; *Arnold's Second Book*, 6s. 6d.; *Bernays' Conversation*, 3s.; *Meeden's Correspondence*, 7s.; *Kaltshmidt's Delectus*, 5s.; *Cassell's Pronouncing De-*

lectus, 5s.; *Tiark's Grammar*, 6s.; *Heerklotz's Extracts*, 3s.; *Habasak's Phrases*, 1s. 6d.; *Fischel's Reading Book*, 5s.; *Eulenstein's Speaking Exercises*, 2s. 6d.; *Franck's Letter Writer*, 3s. 6d.; *Wütich's German for Beginners*, 5s.; *Tyass's Handbook*, 1s.; *Moore's Interpreter*, 5s.; *Moschziker's Guide*, 7s.; *Audlau's Key*, 3s. 6d.; *Nelson's Study Simplified*, 2s. 6d.; *Meissner's Idiomatic Phrase Book*, 2s. 6d.; *Bernstein's Reading Book*, 6s. 6d.; *Lebahn's Self Instructor*, 6s. 6d.; *Meidinger's Self Teacher*, 6s. 6d.; *De Porquet's Trésor*, 3s. 6d.; *Blanchard's Word Book*, 1s.

GERMAN PASTE.—A compound used as a food for larks, nightingales, and other cage birds; it is made as follows:—Peanut meal, 2 lbs.; sweet almonds, blanched, 1 lb.; fresh butter or lard, $\frac{1}{2}$ lb.; moist sugar, 5 ozs.; hay saffron, $\frac{1}{4}$ drachm; beat to a smooth paste with a sufficient quantity of cold water; granulate the mass by passing it through a cullender, and expose the product to the air, in a warm place until quite dry and hard. The addition of two or three eggs improves it.

GERMAN PUDDING.—Stew, until very tender and dry, three ounces of whole rice in a pint and a quarter of milk; when slightly cooled, mix with it three ounces of beef suet finely chopped, two ounces and a half of sugar, an ounce of candied orange or lemon-peel, six ounces of sultana raisins, and three eggs well beaten and strained. Boil the pudding in a buttered basin, or in a well-floured cloth, for two hours and a quarter, and serve it with the following sauce:—Dissolve an ounce and a half of sugar broken small into a gill of sherry, or of any other white wine, and stir them when quite hot to the beaten yolks of three fresh eggs; then stir the sauce in a small saucepan held high above the fire until it resembles custard, but by no means allow it to boil, or it will instantly curdle; pour it over the pudding, or, if preferred, send it to table in a tureen.

☞ Milk, $\frac{1}{2}$ pint; rice, 3 ozs.; suet, 3 ozs.; sugar, 2 ozs.; candied peel, 1 oz.; sultana raisins, 6 ozs.; eggs, 3. Sauce: sherry, 1 gill; sugar, $\frac{1}{2}$ oz.; eggs, 3 yolks.

GERMAN PUFFS.—Pound to a perfectly smooth paste two ounces of sweet almonds, and six bitter ones; mix with them, by slow degrees, the yolks of six and the whites of three eggs. Dissolve in half a pint of cream, four ounces of butter and two ounces of fine sugar; pour these hot to the eggs, stirring them briskly together, and when the mixture has become cool, flavour it with a tablespoonful of orange flower water. Butter some cups thickly, and strew into them a few slices of candied orange peel; pour on the mixture and bake the puffs for twenty minutes in a slow oven.

☞ Sweet almonds, 2 ozs.; bitter almonds, 6; eggs, 3 whites, 6 yolks; cream, $\frac{1}{2}$ pint; butter, 4 ozs.; sugar, 2 ozs.; orange flower water, 1 tablespoonful.

GERMAN SAUCE.—Put some cullis into a stewpan with an equal quantity of good stock; add a little parsley chopped fine, the livers of two fowls braided, an anchovy washed and chopped, a piece of butter, some

salt, and whole pepper; thicken the whole over a slow fire, and use it as required. It forms a savoury adjunct to any dish.

GERMAN SILVER.—Spoons and forks made of this composition are extensively used; and when they are made from the best materials they closely resemble genuine silver, and are equally durable. The cost of these articles is comparatively trifling, and when taken care of and kept bright, they will continue to look very well. To this end, they should, immediately after use, be put into hot water, washed well, and wiped dry with a soft cloth. They should also be washed in soap-suds once a week, and then cleaned with plate-powder, which should afterwards be carefully brushed off. Should this metal become spotted or stained by vinegar or other acids, wash it first, and then clean it with sweet oil and powdered rottenstone. If the spoons or forks have become very much soiled or discoloured, a mixture should be made with a gill of vinegar, and half an ounce each of alum and cream of tartar; add to this a pint of boiling water, dip the plate into the mixture and rub it dry.

GERMAN YEAST.—This has in a great measure superseded the use of English beer yeast in London, and other places conveniently situated for receiving quickly and regularly the supplies of it which are imported from abroad; but as it speedily becomes putrid in sultry weather, and does not in any season remain good long after its arrival here, it is not suited for transmission to remote parts of the country. Bread, made with it while it is perfectly sweet, is extremely light and good; it also answers the purpose for light cakes and biscuits; an ounce of yeast to three pounds and a half of flour, will be found the best proportion to produce a successful baking. In using it, the yeast should be very gradually and perfectly moistened, and blended with the warm liquid in which it is usually mixed; for, unless this be done, and the whole rendered smooth as cream, the dough will not be of the uniform texture which it ought.

GHERKINS PICKLED.—Gather them on a dry day; place them into cold salt and water for four days, with a cabbage-leaf laid over them to keep them down; drain them, and put them into a perfectly clean pan, with vine or cabbage leaves at the bottom, and cover them with vinegar and water, strewing a little pounded alum, and putting more leaves over them; let the water become scalding hot, and repeat this as frequently as possible during the day. Put them into a basin at night, with fresh leaves and the same liquor; next morning, heat them twice with fresh leaves under and over them, and in the same liquor; then drain them; and if for six or eight dozen, put them into a pan with half a pint of vinegar and water sufficient to cover them, and some salt; scald them as before, and put them on and off the fire till they are of a bright green colour; drain, and pour over them boiling water; let them lie a short time in this, and put them into wide-mouthed bottles or stone jars; have ready vinegar boiled up with half an ounce of bruised nutmeg, and one ounce each of

ginger, black peppercorns, and whole allspice; pour it upon the gherkins while hot; cover them till cold, and tie them down with bladders.

GHERKIN SAUCE.—Chop some gherkins, and put them into a stewpan with a little butter and spices according to taste; dust in a small portion of flour, and moisten with a little gravy or stock.

GIBLET PIE.—Cleanse two sets of goose giblets, divide the wings and necks into two, and cut the gizzards into three or four pieces, stew these in two quarts of water, with a few whole peppercorns, a little mace, some sweet herbs, and a large onion sliced, till they are tender. Linc a dish with good paste and lay at the bottom a rumpsteak, on which place the stewed giblets; strain the liquor in which they were stewed into the pie, season with salt, lay on an upper crust, and bake for an hour and a half.

GIBLET SOUP.—Cleanse two sets of giblets, parboil them; take the skin off the feet; cut the gizzards into quarters, the necks into three pieces; the feet, pinions, and livers into two; and the head also into two, first taking off the bill; boil them till nearly done enough in a quart of weak gravy soup with an onion. Have ready boiling, some rich highly seasoned brown gravy soup; add the giblets and the liquor they have been boiled in, with some chopped parsley; take out the onion and thicken the soup with a bit of butter kneaded in flour. Half a pint of white wine may be added; but the soup is very good without this addition.

GIBLETS STEWED.—Divide each gizzard and liver into four, each neck into three, and each wing into two. Stew them until the gizzards are perfectly tender; season them with salt and pepper, a minced shallot, and a small piece of mace. Before serving, give them a boil with a cupful of cream, which has had a piece of butter and a teaspoonful of flour mixed with it.

GILDING LIQUOR.—This name has been given to various solutions of gold, and to other liquids employed in gilding. To produce a *dead gold* effect the following is used: mercury, 1 part; aquafortis (sp. gr. 1.33), 3 parts; dissolve and add soft water, 7 parts. Apply this diluted to the articles, before spreading the amalgam over them in water gilding, or before placing them in the gilding liquor, in gilding by immersion. *Gilder's pickle*, used to impart a rich colour to gold surfaces, especially trinkets, is thus compounded: alum, 1oz.; common salt, 1 oz.; nitre, 2ozs.; dissolved in water, half pint. This application should not be too long continued, as it dissolves a portion of the gold. To give lustre and fire to distemper gilding, take annotto, 2ozs.; salt of tartar, 2ozs.; gamboge, 1oz.; vermilion, 1oz.; dragon's blood, ½oz.; water, 1 quart; simmer down to about one-fourth, add saffron, 20 grains, and when merely tepid, strain through fine muslin into a bottle. A little is floated over the surface of the article with a very soft flat camel-hair brush.

GILDING, TO IMPROVE.—Mix a gill of water with two ounces of purified nitre, one ounce of alum, and one ounce of common salt. Lay this over gilt articles with a brush, and their colour will be much improved.

GILDING, TO PRESERVE AND CLEAN.—Never touch gilding with water, but when about to clean it, blow off the light dust with a pair of bellows, and then pass a feather or light brush over it. If you wish to protect gilding from the flies during the summer season, pin oiled tarlatan over it. Tarlatan already prepared may be purchased at the upholsterer's. If it cannot be procured, it is easily made by brushing oiled silk over cheap tarlatan.

GIN.—A spirituous liquor, of which there is a large consumption in England. Gin is rarely sold to the public in the state in which it comes from the distillery; it would in fact be not so agreeable to the palate in that state; and publicans, therefore, are in the habit of "making up" this liquor for sale, the following being one among many recipes: Good gin (22 under proof) 90 gallons; oil of almonds, one drachm; oils of cassia, nutmeg and lemon, of each two drachms; oils of juniper, coriander, and caraway, of each three drachms; essences of orris-root and cardamoms, of each five fluid ounces; orange-flower water, three pints; lump sugar, 56 to 60 lbs.; dissolved in water, four gallons. The essences are dissolved in two quarts of spirits of wine, and added gradually to the gin, until the requisite flavour is produced, when the sugar (dissolved) is mixed in along with a sufficient quantity of soft water, holding four ounces of alum in solution, to make up 100 gallons. When the whole is perfectly mixed, two ounces of salt of tartar, dissolved in two or three quarts of hot water, are added and the liquor is well stirred up; after which the cask is bunged up and the liquor allowed to repose. In a week it will become brilliant, and may be either "racked" or drawn from the same cask. *Gin sweetened*, prepared from unsweetened gin (22 under proof), 95 gallons; lump sugar, 40 to 45 lbs.; dissolved in clear water, three gallons; mix well; and fine it down as above. It is almost needless to add that all gin is more or less adulterated before it is sold by the retail dealer; the ingredients employed by some are, however, comparatively harmless to the noxious compounds introduced by others; but the consumer has fortunately the means of detecting these adulterations by his palate.

GINGER.—The root-stock or underground stem of a plant which is a native of the mountain of Gingi in Hindoostan, whence the name. It was carried from India to Cayenne and the West Indies, where the greatest part of the ginger of Europe is cultivated. There are two kinds of ginger, but the difference consists chiefly in the mode of preparing it. White ginger consists of the best pieces, of which the outer skin has been scraped off; they are then well washed and dried in the sun: it breaks with a fibrous fracture, and is the strongest and best flavoured; good ginger should be compact and heavy. Black ginger is the inferior


kind, which has only been scalded before it was dried. Ginger is an aromatic, stimulant, and stomachic, very useful in flatulence and spasms of the stomach and bowels, and in loss of appetite and dyspepsia, arising from debility or occurring in old and gouty subjects. It often relieves toothache, relaxation of the uvula, tender gums, and paralytic affections of the tongue. Made into a paste with warm water, and spread on paper it forms a useful and simple headache plaster, which frequently gives relief when applied to the forehead or temples. It is also one of the most agreeable and wholesome spices, and is extensively used as a condiment and flavouring ingredient. In this character it is stimulating to the digestive organs, and is less hurtful than pepper; but, like all excipients, it should be used with moderation.

GINGER BEER.—There are several recipes for making this beverage, the following being the best. 1. Lump sugar, 1 lb.; Jamaica ginger, well bruised, 1 oz.; cream of tartar, $\frac{3}{4}$ oz.; 2 lemons sliced; boiling water, 1 gallon; macerate with frequent stirring, in a covered vessel, until barely lukewarm, then add of yeast, $\frac{1}{4}$ or 2 ozs., and keep it in a moderately warm situation so as to excite a brisk fermentation; the next day rack the liquor and strain it through flannel; work for another day or two, according to the weather; then skim, or again strain, put it into bottles, and wire down the corks. 2. Loaf sugar, 5 lb.; lemon-juice, 1 gill; honey, $\frac{1}{2}$ lb.; bruised ginger, 6 ozs.; water, 5 gallons. Boil the ginger in three quarts of the water for half an hour; then add the sugar, the juice, and the honey, with the remainder of the water, and strain through a cloth. When cold, add the white of an egg and two drachms of essence of lemon; after standing three or four days, bottle it. 3. Take 1 lb. of bruised ginger and the rind of 2 lemons; boil 14 lbs. of loaf sugar and 1 lb. of raisins in 11 gallons of water, pour this over the bruised ginger and lemon-rind, and add the juice of 18 lemons. When at a lukewarm temperature, add two or three spoonfuls of yeast, and let it ferment for a day or so; then put it into a cask to finish the fermentation, and when that is completed, fine it, and bung it down closely. It may be bottled in stone bottles almost immediately. 4. *Quickly made*: pour a gallon of boiling water over $\frac{1}{2}$ lb. of loaf sugar; $\frac{1}{4}$ oz. of sliced ginger, and the peel of 1 lemon; when milk-warm, add the juice of a lemon, and a spoonful of yeast.

GINGER BEER POWDERS.—1. Powdered loaf sugar, 4 ozs.; carbonate of soda, 5 drachms; powdered ginger, 1 drachm; mix these ingredients well together; divide into 12 equal parts, one of each of which put into a blue paper. Then take tartaric acid, 1 oz.; divide into 12 equal parts, and put each into a white paper. Dissolve the contents of one of the blue and of one of the white papers, each in half a glass of spring water. Pour one upon the other, and drink while effervescing. 2. Powdered lump sugar, 2 drachms; carbonate of soda, $\frac{1}{2}$ drachm; mix them together. Take of tartaric acid, $\frac{1}{2}$ drachm; best ground ginger, 5 grains; essence of lemon, 1 drop; mix these together. Dis-

solve the above powders in separate tumblers, containing together about half a pint of spring water; when dissolved, mix the contents of each glass and let it be drunk immediately.

GINGER BISCUITS.—Take three ounces of fresh butter, two pounds of flour, three ounces of powdered sugar, and two of ginger finely powdered; knead these ingredients into a stiff paste, with new milk. Roll it thin, stamp out the biscuits with a cutter, and bake them in a slow oven until they are crisp right through, but keep them of a pale colour.


 Flour, 2lbs.; butter, 3ozs.; sugar, 3ozs.; ginger, 2ozs.

GINGERBREAD.—This well-known cake is made in a variety of ways; the recipes that hereafter follow being the most worthy of recommendation. 1. Treacle, $\frac{3}{4}$ lb.; sugar, $\frac{3}{4}$ lb.; butter, 6ozs.; boil these together for five minutes, and pour the mixture when boiling on 12ozs. of flour; and a teaspoonful of ginger and allspice, in powder, with the peel of 1 lemon grated; when cold, bake in tins. 2. Flour, 2lbs.; carbonate of magnesia, $\frac{1}{2}$ oz., mix; add treacle, $\frac{1}{4}$ lb.; butter, 2ozs.; spice, to taste; tartaric acid, $\frac{1}{2}$ oz.; mix quickly and make it into forms. 3. Treacle, 2lbs.; flour, 2 $\frac{1}{2}$ lbs.; brown sugar, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; caraway seeds, 4ozs.; candied orange peel, 4ozs.; eggs (well beaten), 4; pearlash, $\frac{1}{2}$ oz.; beat the butter to a cream, and mix it with the rest of the ingredients. The next day work it well up, and bake it in a buttered tin. 5. Fresh butter melted, $\frac{1}{2}$ lb.; flour (dried and sifted), $\frac{1}{2}$ lb.; brown sugar, $\frac{1}{2}$ lb.; bruised ginger, $\frac{1}{2}$ lb.; eggs, 9, the yolks and whites separately beaten; rose water, and white wine, two tablespoonfuls each; mix all these ingredients well together, and bake the mixture for an hour, then with a spoon spread it over flat tin pans to about the thickness of a penny-piece; bake it of a light brown, and while warm, cut it into oblong pieces, which place on end till they become cool and crisp. 6. Honey, 2lbs.; sugar, $\frac{1}{2}$ lb.; flour, 2 $\frac{1}{2}$ lbs.; almonds, chopped fine, $\frac{1}{2}$ lb.; orange and lemon-peel, chopped fine, $\frac{1}{2}$ lb. each; cinnamon, 1oz.; mace, $\frac{1}{2}$ oz.; cardamoms, $\frac{1}{2}$ oz.; cloves and nutmeg grated, $\frac{1}{2}$ oz. each. Melt the honey and sugar with one glassful of water; add to it the other ingredients, and make it into a stiff paste; roll it out thin and cut it into small square pieces.


GINGERBREAD NUTS.—1. Flour, dried and sifted, 1lb.; treacle, 1lb.; good good sugar, 3ozs.; fresh butter, $\frac{1}{2}$ lb.; ground ginger, $\frac{1}{2}$ oz.; citron and candied orange-peel cut small, $\frac{1}{2}$ oz. each; melt the butter with the treacle, and when it is about milk-warm, add it to the flour and other ingredients, and then mix all well together; with a spoon drop the nuts upon buttered tins, and bake them. 2. Dissolve $\frac{1}{2}$ lb. of butter in $\frac{1}{2}$ lb. treacle, put it into a pan large enough to contain the rest of the ingredients, and when almost cold, stir 1lb. of dried and sifted flour, $\frac{1}{2}$ lb. of coarse

brown sugar, $\frac{1}{2}$ oz. of caraway seeds, $\frac{1}{2}$ oz. of ground ginger, and the peel of a lemon grated; mix all of these well together, and let it remain till the following day, then make it into nuts by pinching it into pieces with the finger and thumb. Bake them upon buttered tins in a quick oven. 3. Flour, 3lbs.; sugar, 1lb.; butter, $\frac{1}{4}$ lb.; treacle, $\frac{3}{4}$ lbs.; ginger, 2ozs.; allspice, 1oz.; candied orange and lemon-peel, 2ozs. each, chopped fine; 1 lemon-peel grated; and 1 nutmeg ground, and a wineglassful of brandy; rub the flour and butter together, add the other ingredients and mix the whole into a paste, divide it into pieces the size of a nut, and bake them on tins.


GINGER CAKES.—Take three-quarters of an ounce of powdered ginger, one pound of fine flour well dried, three-quarters of a pound of the best Lisbon sugar, and half a pound of butter; mix these ingredients with water to a stiff paste, roll it out, cut out the cakes, and bake them on a tin in a slow oven.

 Ginger, $\frac{1}{2}$ oz.; flour, 1lb.; sugar, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; water, sufficient.

GINGER CANDY.—Break a pound of loaf sugar into pieces, put it into a preserving pan, and pour over it about a third of a pint of spring water, let it stand until the sugar is nearly dissolved, then set it over a perfectly clear fire, and boil it until it becomes a thin syrup. Have ready in a large cup a teaspoonful of powdered ginger; mix it smoothly and gradually with two or three spoonfuls of the syrup, and stir it well into the whole. Watch the mixture carefully, keep it stirred, and drop it often from a spoon, to ascertain the exact point of boiling it has reached. When it begins to fall in flakes, throw in the freshly grated rind of a large lemon, and work the sugar round quickly as it is added. The candy must now be stirred constantly until it is done; this will be when it falls in a mass from the spoon, and does not sink when placed in a small heap on a dish. It must be poured or ladled out as expeditiously as possible when ready, or it will fall into a mere powder. If this should happen, a little water may be added to it, and it must be reboiled to the requisite point. The candy if dropped in cakes upon sheets of very dry foolscap or other thick writing paper laid upon cold dishes, may be moved off without difficulty while it is just warm, but it must not be touched while quite hot, or it will break.


 Sugar, 1lb.; water, $\frac{1}{2}$ pint; ginger, 1 teaspoonful; lemon, 1 rind.

GINGER CORDIAL.—Take one pound of raisins, the rind of one lemon, and three-quarters of an ounce of bruised ginger. Steep these ingredients in a quart of the best brandy, then strain it, and add one pound of powdered loaf sugar to every quart of juice.

 Raisins, 1lb.; lemon, 1 rind; ginger, $\frac{1}{2}$ oz.; brandy, 1 quart; sugar, 1lb. to each quart.

GINGER DROPS.—Rub down half-a-dozen almonds, and half an ounce of citron


or orange peel; add a little sugar, and rub it till it becomes a fine paste; incorporate thoroughly half an ounce of the best powdered ginger; put a pound of sugar in a preserving pan over the fire, with a little water; skim it, and put in the paste. Let it boil to candy height, and then distribute it in drops.

 Almonds, 6; orange peel, $\frac{1}{2}$ oz.; ginger, $\frac{1}{2}$ oz.; sugar, 1 lb.

GINGER, PRESERVED.—For two weeks put the ginger every night and morning into fresh boiling water. Take off the outside skin with a sharp knife; boil the ginger in water till it is quite tender; slice it thin, prepare a syrup of one pound of sugar to half a pint of water; clarify it, and then put the ginger into it. Boil it until it is clear; leave it to cool, and set by in jars.

GINGER, PRESERVED, IMITATIVE.—Peel off the outer coat of the tender stems of lettuce, and throw it away; cut the remaining portion into pieces of one or two inches in length and place them in cold water; to each pound put in a teaspoonful of cayenne, and a little salt; let it stand for one or two days, and allow an equal proportion of fine loaf sugar, clarified. Soak some good ginger in hot water; then take it out, slice it, and add it to the sugar, allowing an ounce and a half to the pound: boil it for a quarter of an hour. Strain off the water from the lettuce, and pour over it the syrup, keeping back the ginger, with which the syrup must be boiled three times, and poured over the lettuce, two or three days intervening between each boiling; at the last add the juice of a lemon. Put by in jars.

GINGER WINE.—Boil together for half an hour three gallons and a half of water, twelve pounds of sugar, a quarter of a pound of the best ginger bruised, and the thin rinds of six large lemons. Put the whole when milk-warm into a clean dry cask, with the juice of the lemons, and half a pound of sultana raisins: add one tablespoonful of thick yeast, and stir the wine every day for ten days. When it has ceased to ferment, add an ounce of isinglass, and a pint of brandy; bung the wine close, and in two months it will be fit to bottle.

 Water, $\frac{3}{4}$ gallons; sugar, 12 lbs.; lemon rinds, 6; ginger, $\frac{1}{2}$ lb.; juice of lemons, 6; raisins, $\frac{1}{2}$ lb.; yeast, 1 tablespoonful; isinglass, 1 oz.; brandy, 1 pint.

GIRDLE CAKE.—Rub six ounces of sugar into two pounds of flour; add a little salt, make the whole into a paste with a sufficient quantity of milk; roll it out, cut it into shapes and bake on a girdle.

GLASS.—The various processes in connection with glass may be performed as follows:—*Annealing* is the operation by which the brittleness of glass is remedied, and it is rendered capable of enduring any alterations of temperature to which it may be exposed. To accomplish this, the glass is immersed in a bath of oil, or a concentrated solution of chloride of calcium or common salt, heating

the whole gradually and cautiously to boiling point, and letting it again cool by very slow degrees. *Cleaning*—Windows, looking-glasses, &c., are best cleaned by dipping a moistened rag into whiting, fuller's earth, or rottenstone in impalpable powder, with which the glass must be smeared and wiped off with a dry soft cloth. This will answer well when the surface is very dirty. In other cases, a little thumb blue, whiting, or chalk in fine powder, tied up in muslin, may be dusted on the glass, and then polished off with chamois leather. *Cutting*—This may be easily accomplished with a common well-hardened steel file, provided it be moistened with oil of turpentine, or plunged under water. It may also be perforated with a common steel bradawl in the same way. Glass vessels, as bottles and tubes, may be readily cut or shortened, by placing a heated iron ring over the spot, or a piece of loose string or cotton dipped in oil of turpentine and set on fire, and immediately on the withdrawal of either applying cold water to the part. Glass vessels of a tubular form, thus treated, will generally crack round, and may be readily divided into two parts. *Grinding*—This may be accomplished on a small scale by friction with powdered emery and water and a flat rubber of wood; care being taken that the article, if in plate, is laid on a perfectly flat surface; or, if hollow, that it be supported by a case of cement or plaster. The *frosted appearance* on glass is given to the panes of windows by gently dabbing the glass over with a piece of glazier's putty, stuck on the ends of the fingers. *Packing*—Procure some soft hay or straw for this purpose; and if the articles are to be sent a long way, the hay or straw should be slightly damped, which will prevent their slipping about. As a general rule, however, it is always better to employ some person who thoroughly understands this.

GLASSES.—When purchasing glasses for table furniture, it is always better to select such as are of superior material and make, as they are not so liable to crack or break as the inferior kinds, and always much more inviting. In cleaning glasses, they should not be washed in hot water, as that is liable to break them, nor in warm water, as that leaves a dull polish on the surface. Cold water is always to be preferred, and if the articles are not more than usually soiled, this fluid alone will suffice; wiping them afterwards with a clean glass cloth, or a leather, if they are required to be very bright. Stains in glass may be removed by dissolving soda in the water in which the articles are washed.

GLAZE.—The highly condensed extract of meat, forming a kind of culinary varnish or glue. To produce it, make a strong consommé, which, when done, pass through a cloth into a basin; fill the stewpan up a second time with boiling water, and let it boil for four hours longer, to obtain all the succulence from the meat, then pour it through a cloth, the same as the first; then pour both stocks into a large stewpan together,

set it over the fire, and let it boil as fast as possible, leaving a large spoon in, to stir occasionally and prevent it boiling over; when reduced to about three pints, pour it into a smaller stewpan, set again to boil by the side of the fire, skimming well if required; when reduced to a quart, place it quite over the fire, well stirring with a wooden spoon until forming a thickish glaze (which will adhere to the spoon) of a fine yellowish-brown colour: pour it into a basin, or, if for keeping any time, into a long bladder, from which a slice may be cut as required. Dishes to be glazed should first be well dried on the surface. Have, on the small scale, the glaze melted in a small jar set in boiling water, and brush the article to be glazed, smoothly over with one coat: this dried, lay on another, and a third, if needful. The process is best performed by a brush made for this purpose, as seen in the engraving; but if this be wanting, the operation may be performed with a bunch of feathers.

GLOUCESTER JELLY.—Boil in two quarts of water, till reduced to one quart, the following ingredients: barts horn shavings, isinglass, ivory shavings, barley, and rice, one ounce of each. When done, strain it; it may be dissolved at pleasure in milk, wine, soup, &c.; it is very light and nourishing, and forms an excellent breakfast for invalids, when warmed in milk and sweetened.

GLOVES.—Gloves are made of a variety of materials adapted for various seasons, and certain occasions. In winter, cloth or buckskin gloves are the most comfortable wear, and in summer, thread or silk. Kid gloves are adapted for intermediate seasons, as also for visits, parties, and other occasions of ceremony. French kid gloves are generally considered the best, and, as a consequence, are much dearer than the ordinary English make. The size of the kid glove should neither be too small nor too large, as the former occasions awkward bores and rents, to say nothing of the discomforts and cramping of the hand, while the latter makes the glove look baggy and ungainly after being worn a few times. When gloves are being put on they should not be pulled violently at the wrist, but coaxed on finger by finger, and finally adjusted by passing the gloved hand through the other. When gloves are taken off, the fingers and thumbs first, and the whole glove afterwards should be pulled out, so that they may regain their original shape, and then be put by. On ordinary occasions, black or dark coloured kid gloves may be worn, but at dress parties, concerts, balls, &c., white or primrose colour are invariably worn. *The etiquette of glove-wearing* dictates, that it is always a mark of vulgarity to be seen out of doors without gloves. It is also

considered bad taste to take off the glove just before shaking hands with a person; but this is a rule frequently disregarded by warm-hearted people, and by those between whom a close degree of friendship exists. The worst taste of all, is shaking hands with a person, and immediately afterwards remarking, "Excuse my glove;" because, if it be unpolite to shake hands with the glove on, why not take it off? and if it be proper to do so, why make any remark about it?

GLOVES, TO CLEAN.—Damp them slightly, stretch them gently over a wooden hand of appropriate size, and clean them with a sponge dipped in recently rectified oil of turpentine or camphine; as soon as they are dry, withdraw them gently from the stretcher, and suspend them in a current of air for a few days, or until they cease to smell of the turpentine. Heat must be avoided. If ordinary oil of turpentine be used, a little essence of lemon may be added to it. The oil should be used liberally, and the first dirty portion should be sponged off with clean oil. *Doeskin, buckskin, and wash-leather gloves*, are cleaned as follows:—Stretch them on a hand, or lay them flat on a table, and rub into them a mixture of finely powdered fuller's earth and alum; sweep this off with a brush, sprinkle them with a mixture of dry bran and whiting, and lastly, dust them well off. But if the gloves are very much soiled they must be treated as follows:—Wash them in lukewarm soft water, with a little curd soap, ox-gall, or bran-tea, then stretch them on wooden hands, or pull them into shape without wringing them; next rub them with pipe-clay and yellow ochre made into a paste with ale or beer; let them dry gradually, and, when about half dry, rub them well, so as to smooth them and put them into shape; when they are dry, brush out the superfluous colour, cover them with paper, and smooth them with a warm iron. *For washing gloves*, the best application is a strong lather made of curd soap with new milk; or water will do. A very small quantity of liquid will suffice. Before wetting the glove, run a strong thread through the opposite sides, close to the wrist binding. Leave it about a quarter of a yard long, and make a large knot at each end. This is to form a loop or handle by which to hang up the glove to dry, and keep it open. Having prepared the lather, put one glove on the hand, and apply the lather by means of a shaving brush or piece of fine flannel, carrying the strokes downwards—that is, from the wrist or arm to the tips of the fingers. Continue this process till the dirt disappears; then dab the glove with a clean soft towel till the soap is removed. Take off the glove, blow into it to open all the fingers, and, by means of the aforesaid loop, hang it to dry in a shady but airy place. The loop should be fixed on two pegs, or by strings fastened to a line in such a manner as to keep the sides of the glove apart while drying. When dry, they will have regained their original colour and be smooth, glossy, soft, and of the proper shape.

GLUE.—The common kind of glue is prepared from the chippings of the hides, hoofs, &c., of animals. These are first soaked for two or three weeks in lime water, and afterwards boiled and skimmed; the solution is then strained through baskets, and gently evaporated to a due consistence, then cooled in wooden moulds, cut into slices, and dried upon nets. *Liquid glue* may be made as follows: Dissolve an ounce and a quarter of shellac in a fluid ounce of naphtha; put the shellac broken finely into a wide-mouthed bottle, stir it with a wire until dissolved, and keep it corked. If thicker than cream, add more naphtha. This glue will be found always ready for use. It is perfectly water-proof, and applicable to the purposes of the carpenter, joiner, and turner. It is used in the same way as common glue, the only difference being that the surfaces that are to be joined must be quite dry. A *mouth-glue* has recently been introduced, which is made in small cakes, so that it may be carried in the waistcoat pocket. When required for use the glue has simply to be wetted with the tongue, and passed over the surface to be operated upon, and the desired result will be effected.

GLUTEN.—The viscid elastic substance which remains when wheat flour is wrapped in a coarse cloth, and washed under a stream of water, so as to carry off the starch and soluble matters. Gluten exists in many grains, and occasionally in other parts of vegetables; but it is a characteristic ingredient in wheat, giving wheat flour its peculiar toughness and tenacity, which particularly fits it for the manufacture of bread, and for viscid pastes, such as macaroni and vermicelli.

GNATS.—A genus of insects comprising several species, which are well known by the severe punishment they inflict. The common gnat, as a larva, is generated in stagnant waters. The larva retains its form for a fortnight or three weeks, when it is converted into the chrysalis, in which state it continues three or four days, floating on the surface of the water, till it assumes the form of the gnat. The most efficacious remedies for the sting of a gnat are, olive oil, unsalted butter, or fresh hogs' lard, timely rubbed in.



GOAT.—A useful domesticated animal, which more than repays the little that it requires. Goats are of a hardy nature, and inexpensive to keep; they will lie in any outhouse or other place, and will eat any refuse, or be contented with the browsings off commons and pastures. In Britain the goat generally produces two young at a time, sometimes three, rarely four. In warmer climates it is more prolific, and produces four or five at once. The term of gestation is five months. The male is capable of propagating at one year old, and the female at seven months; but their best time is at the age of two years, or eighteen months at the earliest. A goat is generally

accounted old at six years, although its life sometimes extends to fifteen. The skin of the goat is convertible to several useful purposes, and the flesh of the full-grown goat is good, though scarcely equal in quality to that of the sheep. But it is for the milk chiefly that the goat is prized; the qualities of that secretion being not only very nutritious, but even medicinal. This milk is sweet, and not so apt to curdle upon the stomach as that of the cow; it is therefore preferable for those whose digestion is weak. The quantity of milk produced daily by a goat is from a pint and a half to a quart, which yields rich and excellent cream; and if properly attended to, a goat will yield milk for eleven months in the year.

GODFREY'S CORDIAL.—A well-known patent medicine, chiefly used to administer to infants, for the purpose of soothing them and inducing sleep. Although by employing this mixture the desired end may be attained, it should always be borne in mind that the remedy having this immediate effect is calculated to bring about bad consequences in the system generally, so much so, that repeated doses of this or any other medicament of a similar character, will deprive the child of its natural vigour, depress his spirits, and finally engender an enervated condition of the system, which will be most difficult of eradication. The original formula of Godfrey's cordial is as follows: Opium sliced, $\frac{1}{2}$ oz.; sassafras chips, 1oz.; English brandy, 1 quart; macerate for four or five days, then add of water, 1 quart; treacle, $3\frac{1}{2}$ lbs.; simmer the whole gently for a few minutes; on the following day decant the clear portion.

GOITRE, BRONCHIOCELE, OR THE DERBYSHIRE NECK. as the disease is variously called, is a chronic enlargement of the thyroid gland, a small glandular body lying in front of the organ of voice in the throat, and which in a natural state presents no external features, but when diseased, is capable of an almost incredible enlargement. Goitre is distinguished by a diffused soft, elastic swelling, extending either quite across the neck, presenting larger prominence on either side than in the centre, or the enlargement may be all on one side, according as the whole gland, or only one of its lobes is affected. The swelling is entirely devoid of pain, and completely detached from the skin, which preserves its natural colour and appearance. Goitres usually make their appearance about the seventh or eighth year, and at first grow very slowly, but after a time develop more rapidly, extending in all directions, and frequently hanging over the chest. The disease is seldom dangerous, unless, from the size it attains when by pressing on the large blood-vessels of the neck, and retarding the return of blood from the head, or by compressing the windpipe, it produces dangerous symptoms. Women are more subject to this disease than men, though in many countries where it is always endemic, both sexes and all ages are found affected with it.

Treatment.—Of all the remedies that have at various times been employed with the

hope of curing this unsightly deformity: one only has ever produced any permanent benefit, namely, *Iodine*, in one or other of its forms. All operations are inadmissible and dangerous; and the cure is to be effected solely by a combination of external and internal remedies. In the first place, where possible, the patient should be removed from the neighbourhood where the disease was produced, the tumour is then to be gently excited by the application of three or four leeches, and the following ointment rubbed well into all parts of the swelling every night, intermitting for a day or two, whenever the skin becomes tender from the rubbing. Take of

Powdered camphor	15 grains.
Calomel	1 scruple.
Iodine	30 grains.
Spermaceti ointment	1 ounce.

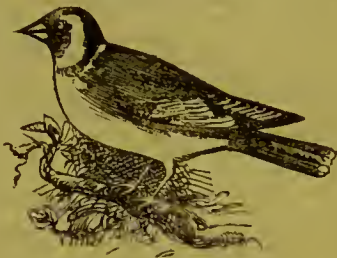
Mix thoroughly, and make an ointment. At the same time a tablespoonful of the following mixture is to be taken three times every day. Take of the hydriodate of potassa, one drachm, mint-water, six ounces, mix. This system should be persevered in for several weeks, the patient, however, carefully taking the measurement of the throat and tumour before commencing either course of treatment; and having accurately recorded the number of inches in circumference, test the diminution every week by remeasuring the tumour till its absorption, and the restoration of the throat to its natural figure.

GOLD ARTICLES, TO CLEAN.—Make a lather of soap and water, boil the article in it for a few minutes, and immediately on taking it out, lay it in magnesia powder which has been heated by the fire; when dry, rub it with flannel; if embossed, use a brush; or, the articles may be simply washed in soap and water, and while wet, put into a bag with some clean fresh bran, then shaken well for a few minutes.

GOLD, TO TEST.—Articles made of gold, have their value regulated according to a certain standard. Articles of pure gold, for instance, are represented to be of twenty-four parts or *carats*, but if there is any alloy, then this is deducted from the whole. Plate is not legally sold as gold except it be of standard purity, and to ascertain this, it undergoes an examination of the assay master of the Goldsmiths' Company, and if found of the correct standard, it is stamped with what is termed the *hall mark*. This mark is a peculiar and distinctive one, and although many close imitations of it appear on spurious metals, yet if it is once closely observed, it will always serve as an infallible guide to persons who are purchasing gold plate and other articles. Gold, or what is represented to be such, may be readily tested by applying a drop of aqua fortis to it; if the fluid remains upon the metal in a colourless state, the metal is pure; but if upon applying the aqua fortis, a green colour appears, the metal is spurious. Another test consists of a smooth black stone called the touchstone; and upon the article to be tested being rubbed upon it, the colour of the mark left by pure gold, differing from

that made by any of its alloys, at once furnishes a test of the comparative merits of the metals. With respect to many ornaments made and sold by jewellers without the proper stamp, and called gold, they contain only a portion of the precious metal, having as much alloy as jewellers can possibly add without losing the appearance of gold; these articles look very well when new, but frequently soon tarnish and lose their colour.

GOLDFINCH.—This bird is attractive from the beauty of its plumage, the sweetness of its song, its great docility, and the readiness with which it breeds with other birds. It may either be kept in the cage or



allowed to run about the room. In the former case, an ordinary small sized chaffinch cage is preferable to a bell-shaped one, as the goldfinch is not fond of hopping about the higher perches, and is apt to become dizzy. In the latter case, a place separated from the rest of the room by a grating, or a small tree or bush, should be provided for its sleeping-place. The food of the goldfinch should be chiefly confined to hemp and poppy seed, especially the latter. A little green food should be occasionally given, as lettuce or cabbage-leaves, groundsel, watercress, &c. The female goldfinch lays once a year five or six pale green eggs, spotted with light red, and often surrounded at the thick end with a circle of small blackish stripes. The males may at a very early period be distinguished by a narrow white ring round the beak. When taken from the nest, they may be reared on poppy seed, and bread soaked in milk and water. The disease to which the goldfinch is most liable, is epilepsy. Sore and swollen eyes, to which they are also subject, may be cured by an application of unsalted butter. Stupor and giddiness are occasionally produced by the immoderate use of hemp seed, and may be cured by the substitution of soaked lettuce and thistle-down. In general, it will conduce to their health, if they be allowed now and then to pull the seeds from a thistle head.

GOLD FISH.—See FISH, GOLD.

GOLD LACE, TO CLEAN.—Burn some rock-alum and sift it to a very fine powder, dip a soft brush in this, and rub the gold lace with it, the colour and brilliancy will be almost immediately improved.

GOLF.—A game played with a club and a ball. The club is from three to four feet in length, according to the stature of the player

and the length of his arm. To the lower part of the club is united, by compact tying, a flattish curved end, which is the striking part; it is faced with horn, and to give force, is loaded with lead. To supply a hold to the hands of the striker the upper extremity of the club is enveloped in a strip of cloth. The ball is about the size of an egg, and is made very firm. It is composed of stout leather, which having been previously soaked in boiling water, allows of it being first very securely sewed, and then turned inside out, leaving a small opening only, by which it is very forcibly stuffed with feathers. The outside is smooth and painted white. In the game of golf there are generally two players, one matched against the other. Each has his own ball. The game consists in driving the ball into certain holes made in the ground, and he who achieves this with the fewest strokes, gains the victory. When four persons play, two of them are sometimes partners, and have but one ball, which they strike alternately. The holes are situated at the different ends and sides of the green at irregular distances, and their number is optional. The usual number is five. A player must never touch his ball with his hand or foot, unless in very particular circumstances, or when he takes it out of one of the holes. When commencing from a hole, the ball may be copped up on the point of a protuberance of mud or turf, to allow of a commanding stroke, and this is called *teeing* the ball; but on all other occasions the ball must be struck or impelled by the golf from the place in which happens to lie. Much depends on the first blow, and it should be given with considerable firmness and a steady arm. Properly performed, the first stroke will send the ball two hundred yards, while at other times a weak or awk-



ward blow will advance the ball only a few feet. When the balls at length get near a hole, great skill is shown in *putting* or giving those delicate strokes which will not force the ball beyond the hole, but, if possible, into it. A knowledge of the value of forces, the nature of the ground, the influence of

the wind or weather, &c., is important in this and all other parts of the game, and is only to be gained by long experience.

GOLOSIES.—A kind of waterproof shoe made to wear over ordinary boots or shoes, to protect the feet from wet and damp. They are especially adapted for female wear, as the boots and shoes usually worn by females are too thin to resist the penetration of wet, even after a few minutes' wear. Golosies will last a long time, and only require an occasional rubbing with a damp flannel, to clean them.

GOOSE BAKED.—Prepare the goose in the same manner as for roasting, and set it on a stand, with a tin underneath; when the underside is done, turn the upper side downwards; and when that is completed, remove the goose from the oven and serve.

GOOSE BOILED.—Singe and draw a goose and pour over it a quart of boiling milk; let it lie in this all night, then take it out and dry it thoroughly with a cloth; cut a large onion with some sage into small pieces; put them into the goose, sew it up at the neck and vent, and hang it up by the legs until next day; then put it into a saucepan of cold water, cover it close, set it over the fire, and let it boil gently for an hour. Serve with onion sauce.

GOOSE BRAISED.—Truss the goose, cover it with bacon, and tie it up; line the stewpan with thin slices of bacon, and lay in the goose with giblets and seasoning. Moisten with a little white wine and as much stock as will cover the goose; let it boil closely covered up for an hour and a half. Serve with apple sauce, or onion sauce mollified with turnip.

GOOSE HAMS.—Divide the goose down the back, and rub into it a quarter of an ounce of saltpetre; then rub it with common salt and coarse brown sugar. After this, let it be in pickle for ten days; rub it and turn it every day, roll it in sawdust, and smoke it by hanging it in the chimney.

GOOSE HASHED.—Put into a stewpan half of an onion chopped, with an ounce of butter; fry the onions until they become slightly browned, then stir in a tablespoonful of flour; put in the remains of a goose left from a previous dinner, cut into neat pieces and well flavoured with pepper and salt; add a pint of stock, let the whole simmer for about ten minutes, then serve.

GOOSE MARINADED.—Bone the goose and stuff it with the ordinary ingredients, together with two or three very acid apples, some beef marrow, the crumb of a penny loaf, pepper, salt, nutmeg, and lemon-peel, all chopped fine and mixed with the yolks of three or four eggs, and a glass of wine; it should then be fried until it is lightly browned, and afterwards stewed in two quarts of good gravy for two hours; the goose must then be taken out, the fat taken off the gravy, to which are added a little lemon-juice, some browning, a gill of red wine, an anchovy chopped, bruised mace, pepper, and salt. Pour this over the goose and serve.

GOOSE, PROPERTIES AND USES OF.—Goose forms a popular and favourite dish, especially in England. It is a very savoury and nutritious food; and although it has the reputation of being injurious to weak stomachs, this consequence is more frequently caused by unskillful cooking or too highly seasoning; it is also notorious that in this case, as in all others where savoury dishes appear, persons are apt to partake of larger quantities than they otherwise would of ordinary food. The *fat of the goose* has healing qualities for certain wounds, and mixed with honey is often successfully employed as a salve for bites of dogs, &c.; when scented, it also affords an excellent pomade.

GOOSE PIE.—Prepare a very stiff raised crust, and make the sides also thick and stiff. Take the bones out of a goose, a turkey, and a fowl, and season with pepper, salt, mace, cloves, and nutmeg, all finely pounded and well mixed. Lay the goose upon a dish, with the breast downwards; on this, place the turkey, then some slices of boiled ham and tongue, and then the fowl; cover the whole with small pieces of ham or bacon. Make the pie of an oval form, with the sides standing an inch and a half above the meat; put on the top and make a hole in the centre of it. Brush the outside of the pie all over with the beaten whites of eggs, and envelope it in three folds of buttered paper; paste the top over in the same way, place it in the oven till it has attained a fine brown colour, then remove the paper, and pour into the centre of the pie, through a funnel, a pound and a half of melted butter; then serve.

GOOSE PUDDING.—Soak half a pound of bread crumb in milk; when cold, add two or three eggs, a little salt, pepper, marjoram, and thyme, a spoonful of oatmeal, a quarter of a pound of suet, and an onion chopped fine. Mix them well together, spread the mass in a dripping-pan, and bake it under the goose.

GOOSE RAGOUT.—Break the breast-bone of the goose until it is quite flat; skin it, and dip it into boiling water; season it with pepper and salt, and a little pounded mace; lard and flour it all over; put three-quarters of a pound of beef suet into a stewpan, and when melted and boiling hot lay in the goose; when it is thoroughly brown, add a quart of hot beef, gravy, a bunch of sweet herbs, a blade of mace, a few cloves, some whole pepper, three or four small onions, and a bay leaf; cover it closely, and let it stew gently for an hour or an hour and a half, according to the size of the goose. For the ragout, cut some turnips, carrots, and onions small, and boil them with a pint of rich beef gravy; put them all into a saucepan with some pepper, salt, and a piece of butter rolled in flour; after boiling, let them stew gently for a quarter of an hour; take the goose out of the stewpan when done, drain it well from the liquor in which it has been stewed, put it into a dish, and serve it with the ragout poured over it.

GOOSE ROASTED.—Boil two ounces of onion with a few sage leaves, chop them fine with a breakfast-cupful of stale bread crumbs and half an apple; mix with it a piece of butter, and a little pepper and salt, with the yolk of an egg, stuff the goose, and tie up the end; set it down to roast before a clear fire, dredge it with flour, and when hot baste it with butter. An hour and a half or an hour and three-quarters will be sufficient to roast it. Serve with apple sauce, onion sauce, and gravy. *The French mode of roasting a goose* is as follows:—Roast a hundred chestnuts over the fire; remove the two outer skins, chop half of the nuts and put them into a stewpan with half a pound of sausage meat, the goose liver chopped, a small piece of butter, some parsley, chives, shallots, and a clove of garlic, all finely chopped. Put this mixture on the fire for a quarter of an hour; then stuff the goose with it and proceed to roast it; it will require two hours to dress it. Put the rest of the chestnuts into a stewpan with a tablespoonful of white wine, two tablespoonfuls of coulis, and a little salt; when done sufficiently, serve this around the goose, or in a tureen separately.

GOOSE SAUCE.—For roasted goose, put into a saucepan a tablespoonful of made mustard, half a teaspoonful of cayenne pepper, a glass of port wine, and a gill of gravy; mix and warm it up, and pour it through a slit made in the apron of the goose into the body. Serve immediately.

GOOSE STEWED.—The geese generally chosen for stewing, are those that are not sufficiently tender to be otherwise dressed. After trussing it, lard it well with bacon rolled in parsley, chives, two shallots, thyme, bay leaf, basilic finely chopped, salt, pepper, and grated nutmeg; put some of the stuffing inside the goose, then lay it in a stewpan that just holds it, with a gill of water, a gill of wine, and a tablespoonful of brandy; add salt and pepper, cover the stewpan closely, and let the contents stew for four hours. Serve hot with the sauce.

GOOSE, TO CARVE.—Cut off the apron 1, 1, of the goose, and pour into the body a large spoonful of gravy, which should be mixed with stuffing. Cut as many slices



from the breast 3, 2, as possible, and serve with a portion of the apron to each plate. When the breast is all served, cut off the joints.

GOOSE, TO CHOOSE.—The flesh of a fine goose should be of a clear pink colour, the liver, pale, the feet and the bill yellow and free from hair, and the claws pliable. When contrary characteristics to these are noted, the bird is sure to be old and tough.

GOOSE, to Truss.—Having well picked the goose, cut the feet off at the joints, and the pinion at the first joint; sever the neck close to the back, leaving all the skin you can; pull out the throat and tie a knot at the end; insert your middle finger into the breast, loosen the liver, &c. cut it close to the vent, and draw out all the inside except the soul, wipe it thoroughly, and beat the breast-bone flat; put a skewer in the wings and draw the legs close up, running a skewer through the middle of both legs and the body; draw the small of the leg close down to the side bone, and run a skewer through; make a hole in the skin large enough to admit the crop, and when stuffed place it through.

GOOSEBERRY CHEESE.—Gather the rough red gooseberries when quite ripe; bake them until they are a perfect mash; pass them through a hair sieve, then put them into a preserving pan, and boil them gently. To every pound of gooseberries put three ounces of sugar, which should be strewn in every now and then, a little at a time. It will take several hours to boil in order to maintain the proper consistence.

GOOSEBERRY COMPOTE.—Put a pint of green gooseberries into a stewpan with two ounces of sugar and a gill of syrup, place them over a brisk fire, as the quicker they are cooked the better colour they will keep; when tender, but not broken, pour them into a basin, and when cold they are ready to serve.

GOOSEBERRY CREAM.—Boil a quart of gooseberries quickly in as much water as will cover them, stir in about half an ounce of good butter; when they are soft, pulp them through a sieve; sweeten the pulp with sugar while it is hot, then beat it up with the yolks of four eggs; serve in a dish, cups, or glasses.

GOOSEBERRY, CULTURE OF.—Of this fruit there are several varieties; but the following selection for a small garden is recommended:—*Reds.*—Old rough red, Melting's crown lob, Farmer's roaring lion, Knight's Marquis of Stafford, champagne and Capper's top sawyer; one of the best of the red gooseberries is the Scotch iron-monger.


Yellows.—Hardeastle's gunner, Hill's golden gourd, Prophet's rockwood, Hamlet's kilton, Dixon's golden yellow, Gordon's viper. *Greens.*—Edwards's jolly tar, Massey's heart of oak, Nixon's green myrtle, Parkinson's laurel, Wainwright's ocean.

Whites.—Coleworth's white lion, Moore's white bear, Crompton's Sheba queen, Saunders's Cheshire lass, Wellington's glory, Woodward's whitemith. The gooseberry may be propagated by all the modes applicable to trees and shrubs, even by pieces of the roots; but the mode by cuttings is usually adopted for continuing varieties, and that by seeds for procuring them. When the first-named method is adopted, the cuttings should be taken from bearing shoots, rather than from the main stem. Cut them to such a length as the strength and ripeness of the wood will bear; cut off all the buds, with the exception of three or four at the top, and train the


plants with a single stem nine or ten inches high, from the top of which the branches should radiate upwards at an angle of forty or forty-five degrees. Immediate planting, watering, and shading are requisite to secure a successful growth; and, if a little moss be tied around the lower part of the cutting, it will cause it to strike stronger roots. When propagation by seed is adopted, the seed of some choice variety, thoroughly ripe, should be taken and sown in autumn or early in spring, in beds or pots of rich light mellow earth. When the plants are a year old, they are planted out in nursery rows, to be cultivated and trained there a year or two; in general, they will bear a third year. The gooseberry will succeed in almost any soil, where the ground is soft and moist, and situated on a dry subsoil. The situation should not be under the drip of trees, over-much shaded, or confined, otherwise the fruit will be small, ill-flavoured, and the plants probably mildewed. The season for planting gooseberries is any time during open weather, from October till February. In large gardens or orchards they should be planted from eight feet to ten feet apart from row to row, and six feet from plant to plant in the rows. In small gardens they should be planted in a compartment by themselves, at the distance of six feet between the rows, and four feet apart from each other. The bushes will require pruning twice a year. In summer, when any bushes are crowded with cross or water shoots of the same year, shading the fruit from the sun, and preventing the access of air, thin the heart of the plant and other tufted parts moderately, pinching off, or cutting out close what spray is removed; but do not touch the summer shoots in general. It will greatly contribute to the perfection of the fruit, if the very small berries are taken away with a pair of seissors, about the middle or end of May. Winter pruning may be performed any time, from November until the end of February, or until the buds are so swelled that further delay would endanger their being rubbed off in the operation. Cut out the cross shoots and water shoots of the preceding summer, and the superfluous among crowded branches. Prune long ramblers and low stragglers to some well-placed lateral eye; or if an under-straggler stray very low, cut it away. Of last year's shoots, retain a sufficiency of the best well-placed laterals and terminals in vacant parts, to form successional bearers. Mostly retain a leading shoot at the end of a principal branch. The superfluous young laterals on the good main branches, instead of being taken off clean, may be cut into stabs of one or two eyes, which will send out fruit-buds and spurs. Of the supply reserved for new bearers, a small number will probably require shortening, where too extended or curved incommodiously; leave these from eight to twelve inches in length, according to strength and situation. Too close cutting, or general shortening, occasions a great superfluity of wood in summer for the multiplied laterals thus forced from the eyes of the shortened branches, increase

to a thicket, so as to retard the growth and prevent the ripening of the fruit; on which account it is an important part of pruning to keep the middle of the head open and clear, and to let the occasional shortening of the shoots be sparing and moderate. Between the bearing branches, keep a regulated distance of at least six inches at the extremities, which will ensure fertile bearers of good fruit. Gooseberries may be said to be in season from April to August. Some late kinds, either planted in shady situations or shielded with mats from the sun in their ripening state, continue good on the tree till September.


GOOSEBERRY FOOL.—Blanch a quart of gooseberries, closely covered, with just sufficient water to pulp them through a sieve; beat six eggs well, and add to them a pint of cream (or milk may be substituted with the addition of an extra egg), a tablespoonful of orange-flower water, a seasoning of cloves, cinnamon, or nutmeg, and sugar to sweeten: stir it over a slow fire till it is of a proper thickness; dish it, and sift sugar thickly over it.

 **Gooseberries,** 1 quart; **eggs,** 6; **cream,** 1 pint; **orange-flower water,** 1 tablespoonful; **cloves, cinnamon, or nutmeg,** to flavour; **sugar,** sufficient.

GOOSEBERRY FRITTERS.—Make a thick batter, composed of six eggs well beaten, three-quarters of a pint of cream, a tablespoonful of yeast, a tablespoonful of orange-flower water, and a little grated nutmeg, adding as much flour as may be necessary to produce the proper consistence. Stew some gooseberries till quite tender; mix them with the batter, chop it into boiling lard, and fry to a good colour. Strew sugar over them, and serve.


 **Eggs,** 6; **cream,** $\frac{3}{4}$ pint; **yeast,** 1 tablespoonful; **orange-flower water,** 1 tablespoonful; **nutmeg,** to flavour; **flour,** sufficient.

GOOSEBERRY JAM.—Select six pounds of the small, red, rough gooseberry. Clip the stalks and tops from them, and put the fruit into a preserving pan, stirring and bruising them as they warm, to extract the juice. Let them boil for ten minutes; then add four pounds of sugar, and place the stewpan over the fire again; let it boil, and continue boiling for two hours longer, stirring it in the meantime to prevent it burning, and removing the scum that arises. When it thickens, and will form into a jelly on a plate, it is sufficiently done. Put it by in pots, allow it to remain uncovered for one day, and then tie the pots down with bladder.

 **Gooseberries,** 6lbs.; **sugar,** 4lbs.


GOOSEBERRY JELLY.—Remove the stalks and tops from a gallon or more of well-flavoured, ripe, red gooseberries, and keep them stirred gently in a stewpan over a clear fire, until they have yielded all their juice, which should then be poured off without pressing the fruit, and passed first through a fine sieve, and afterwards through a double muslin strainer, or a jelly-bag. Next weigh it, and to every three pounds add one pound of white currant juice, which

has previously been prepared in the same way. Boil these quickly for a quarter of an hour; then take it from the fire and stir it to half the weight of sugar. When this is dissolved, boil the jelly for six minutes longer, skim it thoroughly, and pour it into jars or moulds. For the *unmixed gooseberry jelly*: Boil rapidly for ten minutes four pounds of the juice of red gooseberries, prepared as before directed. Take it from the fire, and stir in it until dissolved three pounds of sugar. Boil it again for five minutes, keeping it constantly stirred and thoroughly skimmed.

 **Mixed jelly.** Juice of gooseberries, 3lb.; juice of white currants, 1lb.; sugar, 2lb. **Unmixed jelly.** Juice of gooseberries, 4lb.; sugar, 3lb.

GOOSEBERRY PIE.—Pick and wash the gooseberries and stew them in enough water to prevent their burning; when tender, and while hot, sweeten them with sugar and let them stand until they become cold; then pour them into a pie-dish lined with paste; add sugar sufficient to sweeten, dredge flour upon them, cover them with a paste, of which wet and pinch the edges together, and cut a slit in the centre. Bake for twenty minutes or half an hour.

GOOSEBERRY PUDDING, BAKED.—Stew a pound and a half of ripe red gooseberries in a jar, until they pulp, express a pint of the juice through a sieve, mix it with four ounces of Naples biscuit, three eggs well beaten, and an ounce and a half of butter; sweeten, and bake in a dish lined with a thin paste.

 **Juice of gooseberries,** 1 pint; **Naples biscuit,** 4ozs.; **eggs,** 3; **butter,** $\frac{1}{2}$ oz.; **sugar,** to sweeten.

GOOSEBERRY PUDDING, BOILED.—Make a stiff paste of a pound of flour, half a pound of beef suet, chopped fine, or the same quantity of dripping, butter, or lard mixed together with a little salt and water or milk. An egg may be added if desired; knead the mixture well together and roll it out thinly. Rub the inside of a basin with butter, and line it with the paste, fill it with gooseberries, cover the top over with paste, tie it in a cloth, and boil it for an hour and three-quarters. When done, cut a hole in the top, and stir a little sugar into it.

GOOSEBERRY SAUCE.—Clip off the tops and stems of a half pint of small unripe green gooseberries; scald them, drain them, and stir them into melted butter, with a little sorrel-juice or vinegar. A sprinkle of ginger may be added.

GOOSEBERRY TRIFLE.—Scald such a quantity of gooseberries as, when passed through a sieve, will make a thick layer at the bottom of the dish; add sugar to sweeten, and a little nutmeg. Mix together half a pint of cream, half a pint of milk, and the yolk of one egg: give it a scald over the fire, and stir it all the time; do not let it boil; add a little sugar only, and let it grow cold. Pour this over the gooseberries, and put on it a whip made the day before of a pint of cream, two eggs, sugar to sweeten, and lemon-peel to flavour.

GOOSEBERRY VINEGAR.—Boil three quarts of spring water, and when cold add one quart of bruised gooseberries, let them remain for two or three days, stirring frequently, then strain through a hair bag, and to every quart of liquor add a quarter of a pound of coarse sugar. Put it into a cask with a toast of yeast, and cover the bung-hole with a piece of slate. Set the cask in the sun, and when the liquid has acquired its proper degree of tartness, set it by in the cellar.

GOOSEBERRY WINE.—This wine may be made from either ripe or unripe gooseberries; in the former process, bruise ten gallons of ripe gooseberries in a tub, leave them in that state for twenty-four hours, then press the pulp through a hair-cloth or canvas bag; return the remaining pulp into the tub, and pour on it four gallons of hot water, stir this well up, leave it for twelve hours, and express the liquor as before. Mix the first and second liquors together, and throw away the exhausted pulp. To every four gallons of the mixed liquor add fourteen pounds of white sugar, or fifteen of moist; dissolve and mix this thoroughly with the liquor, and leave it to ferment. Should the weather be very cool place the liquor near the fire. As the fermentation proceeds, the liquor becomes less and less sweet, till at the completion of the fermentation, the sweetness will have entirely disappeared, and consequently, the progress of the fermentation may be readily tested by tasting the liquor from time to time. When the fermentation has ceased, rack the wine off as clear as possible, and completely fill a cask with it; then bung it closely, and set it by in a cellar. Five years in the wood will not be any too long; at the end of this period it may be bottled, and will be in high perfection. For *unripe gooseberry wine*.—Take eight gallons of green gooseberries, bruise them well, add eight gallons of cold water; let them stand for twenty-four hours, drain the liquor well from the gooseberries through a sieve, put three pounds and a half of loaf sugar to every gallon of liquor; pour it into a cask, add a quart of the best gin; let it stand for six months, and then bottle it.—See CHAMPAGNE. BRITISH.

GOOSEBERRIES, TO PRESERVE.—Gather gooseberries that are full grown but not ripe, cut off the stems and tops, and put the fruit into wide-mouthed bottles; gently cork them with corks that are quite new, put them into a pan of boiling water, and let them remain until they are shrunken one fourth part; then beat the corks in tightly, cut off the tops, and pour hot resin over them; set the bottles in a dry place, and the fruit will thus keep for a year.

GOOSEBERRIES, USES AND PROPERTIES OF.—This fruit is employed in a variety of culinary forms. The unripe food is cold and acidulous; the ripe fruit is wholesome and slightly laxative, but the seeds and skins should not be eaten, as they are very indigestible.

GOULARD WATER.—This wash is used for a variety of purposes, and may be compounded as follows: Extract of lead, 1

drachm; distilled vinegar, 2ozs.; spirit of wine, 4oz.; water, 1 pint. As an evaporant this wash is not to be recommended, as it renders the skin dry and harsh. When used as a lotion for the eyes, it may be simply made by mixing two grains of sugar of lead with two tablespoonfuls of water.

GOURD.—This fruit is cultivated in England chiefly as an ornament, and occasionally for use. It is propagated by seed, which should be sown in March upon a moderate bottom heat, using rich soil, and covering the seed to the depth of an inch. Where the number of plants is not great, it is advisable to plant one seed in a large 60-sized pot, and when about three inches high to repot into a 48-sized pot, which will be sufficient for the plants until they are planted out for good—which can rarely be, without protection, before the middle or end of May.

GOURD SOUP.—Parc and slice the gourds; boil them in gravy broth to a mash and strain the liquor off. Put the strained soup into a stewpan over the fire; season with salt and pepper, and boil it for half an hour; put three or four tablespoonfuls of Parmesan cheese into a tureen, pour the soup over it, and stirring both well together, serve.

GOURDS STEWED.—Take gourds when no larger than cucumbers, and cut them in four lengthwise; clear off any pulp. If tender, only blanch them, but if hard, par-boil. Brown two ounces of butter, with a tablespoonful of flour in good gravy; stew the gourds in this, and season with pepper and salt.

GOUT.—The chain of symptoms which give rise to those general and local affections, which are professionally denominated gout, proceed from some constitutional disturbance, of the nature of which medical science is yet completely ignorant. The symptoms have hitherto been regarded as the disease, and it has been found, that whenever these have been duly developed and have passed away, the system as if relieved of some acrid poison, has recovered its elasticity and tone; leaving the patient in the enjoyment of a state of health superior to that usually possessed. Gout appears to be a state of diseased action, gradually vitiating the humours of the body, and accumulating a morbid condition of the system, till the impaired or overcharged organs becoming unable to perform their functions, that disturbance in the physical economy takes place known to us as gout, that is, the symptoms, which indicate the first of the three varieties into which the disease is divided, namely, the acute: the second is, when these symptoms suddenly cease in the part where they commenced, and fly to some internal organ, when it is called retrocedent; and the third, when the system becomes habituated to the malady, which, though mitigated as respects suffering, continues in a permanent but subdued force, when it is called chronic gout. Gout is usually divided into four species or distinctive forms, as—1. *Regular gout*, attended with violent inflammation of the joints, enduring for several days, and then receding

gradually, with swelling, itching, and disquamation or peeling off of the cuticle. 2. *Atonic gout*, attended with debility of stomach or some other internal part, either with or without the inflammation of the joints, accompanied with flying pains and considerable dyspepsia or indigestion. 3. *Retrudent gout*, marked by inflammation of the joints, suddenly disappearing and followed by immediate debility of the stomach or some other internal organ. 4. *Misplaced gout*, shown by inflammation of some internal part, preceded or not by some affection of the joints, which, however, quickly disappears.

General Symptoms.—Dyspepsia, flatulence, lassitude, torpor, low spirits, cold and numbed extremities, with pricking and gnawing sensations in the part, cramps, turgescence of the veins of the foot and leg; the paroxysms usually coming on about two in the morning, with excruciating pains in the joint of the great toe, succeeded by shiverings, a sense of horror and general fever; the pain goes on increasing till the following evening, when it reaches its acme of suffering, from which time it gradually declines, a moisture breaks out on the body, and the patient begins to breathe in freedom, he falls into a tranquil sleep, and discovers on waking that the part so lately in torture is entirely free from pain, but swollen and inflamed.

Treatment.—In this disease the first indication is, to alleviate pain, which must be effected by giving an opiate of sufficient strength to effect that purpose, and at the same time to shorten the paroxysm, exciting an action on the skin. To effect both these objects at once, doses of the following mixture should be taken every two hours till the desired result has been attained:—

Solution of acetate of ammonia	2 ounces.
Spirits of nitre	3 drachms.
Antimonial wine, tincture of squills, laudanum, of each	2 drachms.
Camphor water	3 ounces.

Mix: two tablespoonfuls to be taken for a dose. The affected part is to be enveloped in soft wool or flannel, and the patient's mind soothed; the limb kept at perfect rest, all exciting aliment discontinued, and where the patient is young, a low and abstemious dietary insisted on, and, if necessary, once or twice a week giving a mild purgative of magnesia and Epsom salts. When the paroxysms have been subdued, the colchicum, which some regard with so much favour, may be given either in half drachm doses of the wine or tincture, or in, what is better, the following formulary; but however taken, this drug should be always preceded by an aperient medicine. Take of

Epsom salts	½ ounce.
Magnesia	2 drachms.
Peppermint water	6 ounces.
Wine of colchicum	3 drachms.

Mix, and take one tablespoonful three times a day. When the joint will bear friction, the flesh-brush should be used daily, a milk and vegetable diet pursued, exercise and change of air adopted, and, where

possible, the bath or chalybeate waters moderately taken. The gouty deposits, or concretions formed in joints of persons afflicted with gout, or chalk stones, as they are commonly called, consisting of an insoluble *urate of soda*, can only be dissipated in one way, by the steady use of hensole acid, which, in doses of one scruple combined with two drachms of the carbonate of potass, is to be taken dissolved in water every day an hour after breakfast and dinner, and continued till the depositions are absorbed.

GRAFTING.—The art of causing one plant to grow upon another. The most common application of grafting, is the propagation of valuable orchard fruits, the grafts or scions of which are made to grow upon worthless varieties. This operation is performed in the spring, just when the bark begins to run. A young healthy branch is selected from the plant to be propagated, and divided into lengths or scions, each of which bears about three or four well-formed buds; the lower end of the scion is cut in a sloping manner, to the extent of an inch and a half or two inches, and an oblique incision is made in the cut so as to form a "tongue." The plant to be operated upon, called the "stock," has next a branch, of the same diameter, if possible, as the scion, cut back to the firm sound wood, and then shaved obliquely upwards, till it presents a face of the same dimensions and form as that of the scion; on that face an incision is made obliquely downwards, to receive the tongue of the scion. The two are then fitted together, care being taken that the divided bark of the scion is exactly adapted to the divided bark of the stock; the two are bound firmly together with bark or worsted; the handage is carefully covered with well-tempered clay, in order to keep the parts damp and to exclude air from the wound; and the operation is finally left to nature, with this precaution, that any buds from the stock below the scion are removed as soon as they begin to sprout. In about six weeks or two months the young scion will have made growth, the union is then effected, and the ligature, as well as the clay, may be removed, care being still taken that the scion is not blown off the stock by the winds. Such is the general nature of the operation in its most common form; but it may be varied in many ways, of which the following form the chief. *Whip-grafting* is the most common mode, and is especially to be recommended when the stock and the scion are of the same size. The head of the stock is pruned off at the desired height, and then a slip of bark and wood removed at the upper portion of the stock, with a very clean cut, to fit exactly with the corresponding cut which must be made in the scion. A very small amount of wood must be cut away and the surface made quite smooth. Care must be taken that no



dirt lodges upon the cuts. A sloping cut must now be made in the scion corresponding with that on the stock, and a slit made to fit in a cleft made in the stock when heading it. Care must be taken that the scion fits



bark to bark, on one side at least. Where the stock and the scion differ in point of size, of course only one side can touch, and great care should be taken in this part of the operation; and in the case of a young scion on an old tree, some allowance must be made for the ruggedness of the bark. The scion being thus adjusted, the whole is bound close, but not too tightly, with a shred of matting, care being taken that the inner barks coincide. The clay is now applied, in order to keep the parts moist.

Saddle grafting is practised only where the stock is of moderate dimensions. The stock is cut into a wedge-like form, and the scion slit up the middle, so adapted that it shall be seated across or ride upon the former. The advantage of this mode consists in offering the largest surface for the junction of the scion and stock, but, as in whip grafting, the bark must, at least on one



side, be neatly fitted to the bark on the other. *Cleft-grafting*: in this operation a cleft or division is made in the stock to receive the scion, which is cut like a wedge; again taking care, in case of irregularity of size, to make one side fit bark to bark. The process of tying and claying goes on in the usual manner, with this exception, that a small hole is left in the clay opposite the bud of the scion, to allow that bud to develop itself freely.

When the scion has grown fourteen or fifteen days, it is then headed



back to one bud, which is left to draw up the sap until the union has fairly taken place between the stock and the scion.

Crown grafting is merely a variety of cleft grafting. It is practised upon old trees, either for their total renewal, or upon large amputated branches, to renew by degrees. It is, upon the whole, a better mode than cleft grafting, because the stock, if old, is not subjected to the chance of being split; the scions in this case being

placed between the bark and the wood, as in the engraving. In this kind of grafting, great care must be taken that the bark of the stock be not bruised during the process of opening the bark for the reception of the scion, and



for this purpose a proper spatula or grafting knife should be used. *Shoulder grafting* is not frequently resorted to in England, there being little occasion for its practice. When the stock and scion are equal in size, however, it offers an opportunity of gaining the advantage of an extra amount of alburnous union, as explained by the accompanying illustration.

Side grafting is, in general, performed on a stock, the head of which is not cut off, or on a branch without its being shortened. The great utility of this mode is the facility it offers of



supplying branches to parts of trees where they may have become too thin, or making a branch in case of accidents. It is well adapted for the insertion of new kinds of pears, or other fruits, on established trees, in order to increase the collection, or hasten fruit-bearing. It is also usefully employed upon wall or espalier trees that have become naked of fruit-buds towards the centre, while they may have abundance towards their extremities. *Peg-grafting* is one of the oldest varieties of this mode

of propagation, although now seldom used.



The stock is cut over horizontally at the desired height, and a hole is drilled in the centre to receive the end of the scion; this hole must be in proportion to the size of the tree to be operated upon; if for a small tree or plant a $\frac{1}{4}$ -inch gimlet will be sufficient; but for one of larger dimensions and spreading head an auger of two or three inches may be used. The depth to which this perforation should be made, must be determined by the size of the scion. The scion should also be of the same diameter with the stock, and so fashioned that a portion of its lower end is reduced, leaving only so much of the centre as will form a peg, to fit exactly into the perforation. When the scion is thus fitted on the top of the stock,

the graft or top of the tree is supported firmly in its upright position by props, to secure it against winds, &c.

In the various processes of grafting explained above, the following main principles have a general application, and should be kept steadily in view: 1. Cuttings intended for scions should be taken from the trees before the movement of the sap commences in spring, and put in moderately moist earth or sand, in a shady situation. If the stocks be cut down at the same time it will be so

much the better; any large limbs of trees which it may be found necessary to graft, should by all means be cut in before vegetation becomes active, otherwise extravasation takes place, and canker is in consequence induced. 2. In bringing together the scion and stock, the bark of one should be united with the greatest nicety to the bark of the other. 3. All the processes should be performed with a very clean and exceedingly sharp knife, taking care that nothing, such as dirt or chips, intrude itself between the scion and the stock. 4. Apply the baudage equally and firmly; not so tight as to cut or bruise the bark. The best ligature is formed by broad strips of bast matting. 5. In selecting grafts, be careful in the choice of wood, avoiding, on the one hand, exhausted or badly barked scions, and on the other, the immature watery spray, which frequently springs from the old trunks of exhausted or diseased trees.

GRAFTING CLAY may be made from any smooth clay, or adhesive clayey yellow loam, or brick earth mixed with from one-third to one-half of cow droppings, free from litter, excepting that of hay, and if it contain none of the latter, some fine hay must be beaten up with the mixture. By some, a mixture of clay and horsedung is preferred. The fact is, that any composition will answer the purpose, that will exclude the air, retain some degree of moisture, and, at the same time, prove not injurious to the barks of the stock and scion which it surrounds.

GRAFTING WAX is a compound of pitch, rosin, beeswax, hog's lard, and turpentine; it is reputed the best means of fixing the scion to the stock, but it is liable to two serious objections. In the first place it does not adhere and exclude air, unless both stock and scion are perfectly dry, when it is used; secondly, the winds which prevail at the season of grafting, being very drying, render the absorption of moisture by the scion necessary for its preservation; and as resinous substances do not admit of this absorption, they are on this account less suitable than clay. — See **BUDDING** and **INARCHING**.

GRAINS.—The refuse left in the operation of brewing, consisting chiefly of the husk and other insoluble matters of the corn employed. Grains are extensively used for feeding live stock, and when mixed with rough clover, chaff, and wash, will fatten to any extent. They may be given occasionally either alone or mixed with oats or chaff, to horses. Grains form an excellent dressing for grass land, increasing the quantity, improving the quality, and accelerating the ripening of the crop.

GRAMMAR.—Books: *Lindley Murray's Grammar*, 2s.; *Lovechild's Child's*, 9d.; *Thring's Elements*, 2s.; *Martin's Intellectual*, 1s.; *Goulborn's Philosophy*, 2s.; *Lessons by a Lady*, 2s. 6d.; *Smart's Manual*, 2s. 6d.; *Murray's Reformed*, 1s. 6d.; *Burbury's School Boy's*, 4s.; *Bromby's Pupil Teacher's*, 2s. 6d.; *Griffith's Theory*, 3s.; *Stoddart's Universal*, 5s.; *Lambe's Westminster Handbook*, 2s. 6d.; *Young Ladies' Grammar*, 1s. 6d. For grammars of foreign languages see **FRENCH**, **GERMAN**, **ITALIAN**, &c.

GRANARY.—A place where corn is stored. The best situation for a granary is over the threshing-floor. In order to secure it from vermin, the flooring should be made of the Lombard poplar. A trap-door in the floor, with a roof and pulley, raises and lowers the load in the most easy manner, besides securing it more effectually from depredators; and strong wire windows at each end ventilate it sufficiently. — See **BARN**.

GRAPE, CULTURE OF.—In cultivating this well-known fruit, especial attention should be paid to various points, in order to accelerate the growth, and improve the flavour of the fruit. The warmer the aspect, the greater perfection does the grape attain in our climate, provided all other circumstances are propitious. Shelter from the withering winds is as necessary as warmth. The best aspects are those that range from the eastern to the south-eastern, both inclusive; the next best are those from south-east to south. The soil which is most congenial to the growth of the vine and the perfection of its fruit in this country, is a light, porous, rich, sandy loam, not more than eighteen inches in depth, on a dry bottom of gravel, stones, or rock. All borders, therefore, made expressly for the reception of vines ought to be composed of a sufficient quantity of dry materials, as stones and pieces of brick, lumps of old mortar, broken pottery, oyster shells, &c., to enable the roots to extend themselves freely in their search after food and nourishment; to keep them dry and warm by the free admission of air and solar heat; and to admit of heavy rains passing quickly through, without being retained sufficiently long to saturate the roots, and thereby injure their tender extremities. The construction of the walls against which grapes grow, vary under different situations and circumstances. If built for the express purpose of rearing grapes, low walls of not more than six feet in height are to be preferred, as more convenient for pruning and training the vines. Brick walls are undoubtedly the best, the surface being smooth and even. A considerable heat is obtained by blackening the wall. Vines are propagated in the open ground by layers and by cuttings. The former is the most expeditious mode, provided the shoots be laid down in pots, and planted out the same summer. The latter mode is much the best. To provide cuttings to be planted at the proper season, select at the autumnal pruning a sufficient number of shoots of the preceding summer's growth. Choose such as are well ripened, of a medium size, and moderately short-jointed. Cut them into convenient lengths of six or eight buds each, leaving at the ends not less than a couple of inches of the black wood for the protection of the terminal buds. Stick these temporary cuttings about nine inches in the ground, in a warm and sheltered situation, where they will be effectually protected from the severity of the winter. The best time to plant them out is about the middle of March, but any time from the 1st of that month to the 10th of April will answer very well. *Pruning* and *training* are so closely connected together,

and so mutually dependent on each other, that they almost constitute one operation. The judicious pruning of a vine is one of the most important points of culture throughout the whole routine of its management. The object is to get rid of all the useless and superabundant wood, for those shoots of a vine which bear fruit one year never bear afterwards. As the sole object in view in pruning a vine is to increase its fertility, the best method to accomplish this is to leave a sufficient supply of bearing shoots on the best possible proportionate quantity of old wood. The following general rules should be observed in pruning:—Always cut upwards, and in a sloping direction. Always leave an inch of blank wood beyond the terminal bud, and let the cut be on the opposite side of the bud. Prune so as to leave as few wounds as possible, and let the surface of every cut be perfectly smooth. In cutting out an old branch, prune it even with the parent limb, that the wound may quickly heal. Prune so as to obtain the quantity of fruit desired on the smallest number of shoots possible. Never prune in frosty weather, nor when a frost is expected. Never prune in the months of March, April, or May, as bleeding is then caused, and a consequent wasteful and injurious expenditure of sap. Let the general autumnal pruning take place as soon after the 1st of October as the gathering of the fruit will permit. Lastly, use a pruning knife of the best description, and let it be, if possible, as sharp as a razor. The principal object in training is to regulate the position of the branches so as to protect them from the influence of the wind; to bring them into close contact with the wall, for the purpose of receiving the benefit of its warmth; to spread them at proper distances from each other, that the foliage and fruit may receive the full benefit of the sun's rays, and to retard the motion of the sap for the purpose of inducing the formation of fruit buds. For this reason, the method of serpentine training may be considered preferable to every other, being calculated in a greater degree to check the too rapid ascent of the sap, and to make it flow more equally into the fruiting shoots, and those intended for future bearers. On walls that are much less than five feet high, a portion of the shoots must be trained horizontally. The advantages of *propagation by grafting* are many and important. It improves the various kinds of grapes, especially the sound kind, so that by grafting a weak and delicate growing vine upon a robust and vigorous stock, well-sized handsome bunches of grapes will be produced. At the pruning season select cuttings for grafts from the best bearing branches, in general preferring the bottom part of last year's shoot. Preserve them by inserting three parts of their length in pots till wanted. The season for grafting in stoves is the middle of January; in the open air, the middle of March. On small stocks not more than one inch in diameter, cleft-grafting will be found the most proper; but upon larger stocks, whip-grafting is to be preferred. For cultivation of the grape by

forcing, the following directions will be found, generally speaking, the best to follow:—Let the temperature at the commencement be fifty or fifty-two degrees; increase gradually, but do not exceed sixty degrees till the buds are expanded and bursting into leaf. When the buds have burst, and the leaves are slightly developed, the temperature may be raised to sixty-five degrees and progress to seventy; and when the branches are formed, and the bloom about to expand, seventy-five degrees will not be too much, and this should be continued as the minimum till the fruit ripens. By sun-heat the temperature may be safely raised as high as eighty or even ninety degrees in the summer season, provided that fire-heat is not in use at the same time. Air should be freely admitted; but in doing so the temperature of the house should never be lowered; that is to say, the air should be given in time to prevent the accumulation of too much heat, and not used in order to disperse it after the heat has, by neglect, been allowed to accumulate to too great a degree. The air of the house should be kept moist, except when the fruit is ripening. The syringe may be used for the branches and leaves from the commencement of forcing till the fruit begins to colour, excepting while the fruit is in bloom. Recourse should also be had to steaming, and more especially when the fruit is setting; to this end water should be poured on the floor, if there be no bed of soil within the house, and if there be, the bed should be stirred on the surface and watered, but not with water of low temperature.

GRAPE JAM.—Stew grapes till they become a soft pulp, and strain them through a sieve. Weigh the fruit, and to every pound, put a pound of sugar. Boil twenty minutes together, stirring often. Then remove from the fire, and put by in jars.

GRAPE PIE.—Select grapes that are half grown, wash them, and cut them into halves; line a pie dish with paste; fill it with grapes, add four tablespoonfuls of sugar, and a tablespoonful of water; cover with paste, make an incision in the top, and bake for thirty-five minutes.

GRAPE WINE.—The best kind of grape for wine in this country is the Sweetwater, because it ripens better than any other. The grapes should be gathered when they are fully ripe, freed from the stalks, and thoroughly bruised, care being taken not to crush the stones, which would impart a rough and disagreeable taste to the wine; they must have the juice completely pressed out of them, either by wringing them in a coarse cloth or by means of a press. To every gallon of the juice from one to two pounds of sugar must be added, or even more, if the juice does not possess considerable sweetness. Set the liquor in a place where the temperature is about sixty degrees, which is the usual warmth of rooms. The fermentation will begin in a day or two, when the wine may be put into the cask designed to receive it. As the fermentation proceeds, the scum will be thrown up, and the cask must be kept filled up with some reserved juice. If the temperature should be

below sixty degrees, or the fermentation be scarcely perceptible, a small portion of yeast must be used, so as to make it work before it is put into the cask. When it has been sufficiently long in the cask for the fermentation to subside, or nearly so, the bung must be driven in, first clearing away all impurities from around the bung-hole, and filling up the cask. The vent-peg must be left out for a few days; it should afterwards be inserted slightly, and occasionally loosened, to admit of the escape of carbonic acid gas. When all fermentation has entirely ceased, which will be known by hearing no hissing noise at the bung-hole, the peg must be driven in tightly, and the wine may then be left throughout the winter, or longer, as may be desired. If the fermentation has been perfect, the wine may be bottled in December, but it is much better for being kept longer.

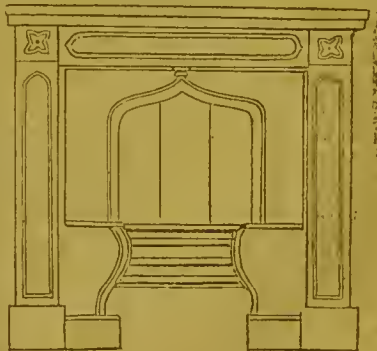
GRAPES, TO PICKLE.—Let the grapes be at their full growth, but not ripe; cut them into small bunches, put them into a stone jar, with vine leaves between every layer of grapes, till the jar is full; then heat as much spring water as will cover the grapes and leaves, and put to it a brine strong enough to float an egg; when this boils skim it, run it through a flannel bag and let it stand to settle; when cold, strain it again through the bag, and then pour it to the jar over the grapes leaving them well covered; fill the jar with vine leaves, then tie it over with a double cloth, and set a plate upon it; let it stand two days, then take off the cloth, pour away the brine, take out the leaves and the fruit, and lay them between two cloths to dry. Boil together two quarts of vinegar, one quart of spring water, and one pound of coarse sugar; let it boil a little while, skim it very clean as it boils; let it stand till it is quite cold; wipe the jar very clean and dry, put some fresh vine leaves at the bottom between every bunch of grapes and on the top, then pour and strain the pickle on the grapes; tie on a thin piece of board in a bit of flannel, and lay it on the top of the grapes, to keep them under the pickle; tie them down with bladder first, and leather afterwards.

GRAPES, TO PRESERVE.—Gather the grapes in the afternoon of a dry day, before they are perfectly ripe. Have ready a clean dry barrel and some wheat bran. Place in the barrel a layer of bran, then a layer of grapes, followed by a layer of bran, and so on alternately till the barrel is filled, taking care that the grapes do not touch each other, and to let the last layer be of bran; then close the barrel so that the air may not be able to penetrate, this being a very essential point. Grapes thus packed will keep for nine or twelve months. To restore them to their original freshness, cut the end of the stalk of each bunch of grapes, and put that of white grapes into white wine, and that of black grapes into red wine, in the same manner as flowers are put into water, to revive or refreshen them.

GRASS.—The general culture of grasses, though one of the most simple departments in agriculture, requires some judgment in

the appropriate execution of the design, according to the ultimate view of the cultivator. Thus the selection and treatment of grasses for temporary and for permanent uses, demand distinct treatment, and will be found under the respective heads of **HAY** and **PASTURE**.

GRATE.—Grates are made in every variety of form and of different materials. The principal improvement introduced of late years is in the setting of a grate, which is now usually placed within eight or ten inches of the hearth, instead of being raised two or three feet, as formerly. By this means a greater amount of heat is radiated through the apartment, instead of being suffered to escape up the chimney. It is always better to have a grate lined with fire brick, instead of being wholly constructed of iron; because, in the latter case, the iron constantly parting with its heat, prevents the fuel in its vicinity acquiring the temperature necessary for perfect combustion. But when the grate is lined with fire brick of considerable thickness, the brick retains the heat imparted to it, and reacts upon the fuel until both are heated up to a clear bright fire, free from smoke, and giving out treble the heat that can be obtained from a grate holding the same quantity of fuel, but lined with iron. Sometimes the space beneath the grate is filled up with fire bricks, which has the effect of increasing the heat-producing power very considerably. When the grate is raised somewhat higher than ordinarily, a drawer may be added to the front bars, and bottom grate under the latter for receiving the ashes, so as to prevent them from raising a dust, by falling from the grate to the hearth, and at the same time to retain more heat about the fire. The ashes may also be carried away in the drawer, in furtherance of the same object; and by drawing it out more or less, or keeping it closely shut, the burning of the fire may be accelerated or retarded. In cases where chimneys smoke and cannot be remedied, as for instance, in low-roofed cottages situated among high trees, a simple and economical grate may be constructed to remedy the existing evil. In these grates



the jambs are generally formed of a kind of fire stone; the fire chamber is wide in

front, hut not deep; in consequence of which it consumes but few coals in proportion to the heat it throws out. The upper part of the fireplace behind and at its sides is formed of the same stone, and in front there is fixed a cast iron plate with an opening in it. Grates thus constructed draw well; but it must be obvious that, in proportion as this is the case, a greater amount of heat must be carried up the chimney. Persons of limited means, and who cannot afford to keep a large establishment of servants, should not select grates with burnished steel fronts, as they require a great deal of care in cleaning, and are very liable to rust during the summer when not in use. See ARNOTT'S STOVE, RANGE, STOVE, &c.

GRATES, TO CLEAN.—Grates which are not polished must first be rubbed with a hard brush and fine sand, if there be rust or dirt; a quarter of a pound of black lead is then to be rubbed up in a mortar, with a teacupful of vinegar, to be laid on, and when dry to be polished off with a dry brush. For *polished grates*, make a paste of one ounce of soft soap and two ounces of emery powder; put this on the steel, and afterwards rub it with a dry wash leather, and a brilliant polish will be produced. In the summer when fires are not used, finish off with rottenstone. To prevent rust, the steel should be daily rubbed with leather.

GRAVEL.—A term applied to a well known natural production. It is chiefly employed in making walks for gardens, pleasure grounds, &c. In these cases, the foundation of the walks should consist of lime, rubbish, large flints, broken earthenware, or pottery, to the depth of sixteen or eighteen inches. This substratum should then be well rolled, so that it may never afterwards vary its position, either with the weight of the covering or any weight that may pass over it. The covering of gravel need seldom be thicker than four or five inches; and in order that it may bind, it should be freed from very large stones. Where gravel does not contain a sufficient quantity of soil or earthy matter to cause it to bind, this quality may be imparted by clay burnt, and then reduced to a state of powder, and mixed with the gravel before it is laid on, or mixed with water, and thrown over the walks after they have been covered with gravel; in both cases rolling the whole firmly immediately after the clay has been applied.

GRAVEL WALKS, TO PRESERVE.—In order to protect gravel walks from both moss and worms, and also to prevent weeds springing up, a simple remedy consists in mixing three parts of water to one of brine, from the salting tub, and pouring the mixture on with a watering-pot. Every autumn and spring the walks should be liberally watered for a week, and occasionally sprinkled over in summer.

GRAVY.—A variety of gravies are made to suit different dishes. *Beef gravy.* Put some slices of lean beef into a stewpan with an onion and a little pepper and salt; cover them with water, take off the scum, and let the gravy simmer until the juice of

the meat is wholly extracted. Put a crust of toasted bread into it, and strain the gravy when done. *Brown gravy.* Cut a piece of lean beef or veal into thin slices, and put them into a stewpan, with a piece of butter or a slice of fat bacon, and an onion sliced; brown the meat lightly and cover it with sufficient water or broth for the gravy; take off the scum, add pepper and salt, sweet herbs, &c., and stew the whole until the meat is thoroughly done. Strain the gravy, and if desired, thicken with flour. It may also be flavoured to suit the dish for which it is required, with ketchup, lemon-juice, cayenne, &c. *Gravy for roast meat* may be made by putting any trimmings of the joint into a small stewpan, and stewing them before the meat is done. Gravy is commonly made by pouring a little water over the brown parts of the joint about half an hour before it is done. Another way is to pour a little boiling water over the inferior parts of the meat, after it is taken from the fire. Care should be taken in following these methods, that the meat is not soddened, by using too much water. *Gravy for boiled meat* is usually made by putting a little of the liquor in which the meat is boiled into the dish. *Gravy from bones.* Break into pieces a pound of beef, mutton, or veal bones; if mixed together, so much the better; boil them in two quarts of water, and after it boils, let it simmer for nearly three hours; boil with it two onions, a bunch of sweet herbs, some salt and pepper; strain, and keep it for making gravy or sauces. The bones of boiled and roasted meat being scraped, washed clean, and boiled in less water, answer equally well for this purpose. *Gravy for poultry* may be made by stewing the neck, gizzard, &c., with the liver bruised; a bit of lemon-peel should be added, and a spoonful of ketchup; strain it when done. *Gravy for game.* Use brown gravy, add a bit of lemon-peel to it, a glass of wine, &c. *Gravy for venison* is best made with the trimmings of the meat, or with mutton. Brown the pieces of meat in a stewpan, or broil them a little; cover with boiling water, take off the scum, and season with a little salt; when quite done, take the fat off. *Gravy for wild fowl.* Add a piece of lemon-peel to some brown gravy, put in also a glass of wine and a little lemon-juice. As a *ready made and portable gravy*, that sold in bottles under the name of "Scarlett's Concentrated Essence of Meats" is very excellent. For giving a rich flavor to impromptu dishes, and for economising the use of cold meats and other remnants, it is very valuable, and should be included in the housewife's list of essentials.

GRAVY SOUP.—Dry a pound of flour in the oven until it is quite brown, then mix it with cold water, and put it to six quarts of stock, with two teaspoonfuls of salt, and one of pepper; put into a stewpan four onions, two carrots, one turnip, an ounce of allspice, an ounce of hutter, and a few sprigs of thyme and marjoram; fry these until they assume a dark brown colour; then put them into the stock, and let the whole boil for an hour; then strain it through a sieve, and

serve with fried bread cut as dice. *Clear gravy soup* may be made as follows: Take five or six pounds of the thick fleshy part of the shin of beef, put it into a large saucepan and pour in three quarts of cold water, and when it has been brought slowly to boil, and has been well skimmed, add an ounce and a half of salt, half a teaspoonful of pepper, eight cloves, two blades of mace, a bunch of savoury herbs, a couple of small carrots, the heart of a root of celery, and an onion. When the whole has stewed very gently for four hours, probe the meat, and if quite tender, take it out; let the soup simmer for two or three hours longer, and then strain it through a fine sieve into a clean pan. When it is quite cold, clear off every particle of fat; heat two quarts of the liquor, stir in when it boils half an ounce of sugar, a tablespoonful of soy, and two tablespoonfuls of ketchup. If properly made, the soup will be perfectly transparent. A savoury dish may be made from the beef and fragments left, by adding a few fresh vegetables and a little liquor, and boiling the whole again.

GRAYLING or UMBER, scientifically termed, *salmo thymalis*, from a smell that it emits when newly caught, somewhat similar to that of thyme (some say like cucumber), is perhaps the most gracefully and elegantly formed of our fresh-water fish, and from being exceedingly quick in its motions, rubbing within the sphere of vision, and then gliding out of sight more like a shadow or ghost than a fish, it has acquired its second name of Umber or shadow. It has a peculiarly large back fin and the lower portion of the tail is larger and longer than the upper, which enable it to perform such rapid evolutions. It is to be found in but few of our rivers, the Test, Teme, Lug, and the Dove (the classic Dove), being perhaps the best; it is also found in the Itchen, Avon, and Stour in Hampshire; in the Wye and Severn, in the west; and in the Trent, Wye, Irton, Hilder, and the Wharfe in the north, and a few others. It has lately been introduced into the Kennet in Berkshire, where it appears likely to thrive although its culture has failed in the Thames, and also successfully into the Clyde, and one or two other Scotch rivers. The grayling spawns from the end of March to the end of April, and does not come into good season again until September; it is in its best season from this time until February, and will feed at the surface on flies, at midwater and at the bottom on worms, gentles, caddis, wasp grubs, caterpillars, &c. The rod for grayling fishing should be (for fly fishing) similar to that used for trout fishing; and for bait fishing similar to that used for dace fishing; both the running or casting line and the gut bottom should be as fine as the skill of the angler will allow, and as near the colour of the water fished in as can be procured. The grayling is to be found in somewhat quieter and deeper water than the trout, but still in the immediate neighbourhood of sharp streams, to which it will occasionally resort. The best months for grayling fishing are, from

September to February, and they may be taken both with the artificial fly and with gentles, even in frosty weather in the middle of the day, if the sun shines out cheerily; although at other times cloudy weather is preferable. The angler should strike and play a grayling very gently and cautiously, as its mouth is more tender than that of any other fish.—Books: *Davy's Salmonia*; *Ephemera*; *Walton & Cotton*; *Ronalds*, &c.

GRAZING.—In stocking grazing inclosures, it will be found most expedient to separate the cattle in the following manner: Supposing there are four fields, each containing a nearly equal quantity of land, one of them should be kept entirely free from stock until the grass has reached its full growth, when the prime or fattening cattle should be put into it, in order that they may obtain the best of the food; the second best should then follow; and after them either the working or the store stock, with lean sheep, to eat the pasture close down; thus making the whole of the stock feed over the four inclosures in this succession: No. 1. Clear of stock, and reserved for the fattening beasts. No. 2. For the fattening beasts until sent to No. 1. No. 3. For the second best cattle until forwarded successively to Nos. 2 and 1. No. 4. For stores and sheep to follow the other cattle; then to be shut up until the grass is again ready, as at No. 1, for the fattening beasts. By this expedient the fattening cattle will cull the choicest parts of the grass, and will advance rapidly towards a state of maturity. It is also advisable to divide the fattening enclosures by hurdles, so as to confine the beasts within one-half of it at a time, and to allow them the other half at the other, so that they may continually have fresh pasture. Shade and pure water are essentially necessary; and where there are no trees, rubbing posts should be set up, to prevent the cattle from making that use of the gates and fences.

GREASE.—The mixture known by this name, and which is used for lubricating the several parts of carts, waggons, and other implements in connection with agriculture and rural economy, consists of equal parts of tallow or train oil and common tar. It is usually kept in a deep narrow tub, and applied with a broad pointed stick. When a cart is to be greased, the linchpin and washer are removed from the projecting point of the axle; the upper part of the wheel is then pulled towards the person from the cart with such a jerk as to allow the lower edge of the wheel to remain on the same spot of ground where it was, and the point of the axle-arm will then lean upon the edge of the bush at the back of the nave. The grease is then spread upon the upper side of the axle-arm with the stick, the wheel pushed back to its proper point, and the washer and linchpin restored to their respective places.

GREASE STAINS.—These unsightly marks may be removed from various surfaces as follows: *From floorings of wood or stone*. Make a strong infusion of potash with boiling water; add to it as much quicklime

as will bring it to the consistence of thick cream; let it stand for a night, then pour off the clear part and bottle it for use. When wanted, warm a little of it; pour it upon the spots, and after it has been on them for a few minutes, scour it off with warm water and soap. When put upon stone, it is best to let it remain all night; and if the stain be a very bad one, a little powdered hot lime may be sprinkled over it before the infusion is applied. From *cloth*. Moisten the stains with a few drops of concentrated solution of subcarbonate of potash; rub the parts between the fingers, and then wash the cloth with a little warm water. From *leather*. Apply the white of egg to the stain, and dry it in the sun; or mix two tablespoonfuls of spirit of turpentine, half an ounce of mealy potato, and a little of the best mustard. Apply this mixture to the stain and rub it off when dry. The addition of a little vinegar renders it more efficacious. From *paper*. Warm the greased part of the paper, and then press it upon pieces of blotting paper, one after another, so as to absorb as much of the grease as possible; have ready some fine, clear, essential oil of turpentine, heated almost to a boiling state, and apply a little of it with a soft clean brush to both sides of the greased paper; repeat this application until the grease is extracted. Lastly, with another brush, dipped in rectified spirits of wine, go over the spot, and there will be neither grease nor discoloration remaining. From *silk*. Lay the silk, with the right side downwards, upon a table covered with a piece of woollen cloth or baize, upon which lay smoothly the part stained. Place a piece of brown paper upon the top of the silk, and press it with a flat iron just hot enough to sear the paper. Remove the iron after five or six seconds, then rub the stained part briskly with a piece of cap-paper.

GREEN DYE.—The goods are first dyed blue, regulating the shade according to that of the intended green; they are then dried, rinsed, and passed through a yellow bath, with the like precautions, until the proper shade is produced.

GREENFINCH.—This bird is somewhat longer than the chaffinch. The general



colour is yellowish green; the under part of the body is usually tinged with white; the

quill feathers are blackish bordered with yellow. The female is smaller, and easily distinguished from the male by having the upper part of the body of a browner green, and the lower part of an ashen grey. It should not be allowed to mingle with other birds, unless it is well supplied with food, as its nature is so rapacious and spiteful that it will appropriate the food drawer to itself and effectually drive other birds away. Its food should consist chiefly of rape seed, with a little hemp seed after moulting. It also thrives well upon paste; and requires occasionally a little green-meat. The tameness of the greenfinch is its chief attraction, as it may not only be accustomed to flying in and out, but even to breeding either in a room which lies near a garden, or in a summerhouse.

GREENGAGE COMPOTE.—Cut greengages in half, scald them until they are tender; drain and cover with clarified sugar; boil to a strong blow, with the juice of lemon, and a few kernels of the greengages blanched, and boil them up twice; take them out and dress them on a dish.

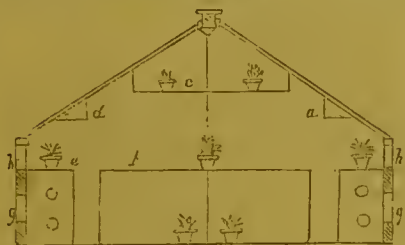
GREENGAGE, CULTURE OF.—See PLUM.

GREENGAGE JAM.—Rub ripe greengages through a hair sieve, and put them into a preserving pan: then to a pound of pulp, add a pound of sifted sugar; after which, boil to a proper consistence, skim it thoroughly, and put it into small pots.

GREENGAGES, TO PRESERVE.—Take unripe greengages, prick them all over with a pin, and put in cold water sufficient to cover them well; add a tablespoonful of sugar; put them over the fire, stirring them gently; when near boiling they will float and become tender, and will then be done sufficiently; put them into a tub with the liquor they were scalded in, for two days, to sour; drain them, and put in copper pans well covered with vine or cabbage leaves; cover them over with an equal quantity of syrup and water, mixed: heat them gently on the fire till they become green; strain them off and put them in earthen pans; pour as much syrup boiled to a little blow, as will cover them; next day drain, place them in the pans again, add more syrup, boil to a blow and cover them again; repeat this boiling once more on the next day; if wanted for pots boil them twice in as much of the jelly as will cover them; it wanted for brandy strain them off from the syrup, and cover them with brandy.

GREENHOUSE.—A light airy structure designed for plants, which can sustain a somewhat low temperature, but cannot withstand the vicissitudes from frost to sunshine, and from damp to dry, of our ordinary winters. It is distinguished from a plant-stove in requiring but little artificial heat; and from a conservatory, in having all the plants grown in portable tubs or pots, and these generally set upon a stage, to bring them nearer to the glass. The annexed diagram represents a most economical and commodious structure. On the floor, fuchsias, hydrangias, and other deci-

duous plants may be wintered. On the principal platform, *b*, camellias, oranges, mangolias, and such plants as do not require a direct light, may be grown. On *c*, which is a broad shelf suspended from the roof, geraniums, heaths, verbeuas, &c., may be placed, as well as on the two side shelves *d d*; and other plants on the side tables *e*, under which the flues or hot-water pipes are to be placed. Ventilation is to be effected by opening the ridge on the top of the house, and also at the side *g g*; and in summer, when an increase of ventilation is required, by opening the upper ventilators *h h*. No side lights being required, the whole might be erected at little cost. Green-



houses may be designed in any form, and placed in almost any situation as regards aspect. In the management of a greenhouse, ventilation forms a chief care. Abundance of air must be admitted on all favourable occasions, more especially after those plants which have been set out for a season are brought in again, that the transition to them may be the less experienced. The best means of heating is by hot water; for this purpose a compact boiler, well set, with a flow and return pipe, will be found most serviceable. Care must be taken that a temperature is preserved most favourable to the object in view; if it be intended to preserve the plants, the temperature should be from thirty-five to forty degrees. Where it is desired slowly to grow the shoots, and to keep a winter display of plants in bloom, the temperature must not sink below forty-five degrees. Potting should take place early in spring, when an examination should be made, and those plants intended to be grown as specimens should be shifted into pots two sizes larger than those they have been growing in. Watering must be regulated by the growth of the plants, the quantity of water at the roots being increased as vegetation advances. The time chosen for watering should be morning in the winter, and evening in summer. The arrangement of the stages is a matter of great importance. For a general collection, the stage may be from five to six feet from the glass roof; for ensuring dwarf, compact, bushy plants, the distance should be from three to four feet. The lowest shelf of the stage should be a little higher than the shelf that surrounds the house next the front glass. In a wide greenhouse it is always preferable to have several stages, in the shape of circles, ovals or triangles, with walks between

them. All crowding of plants should be avoided, nothing tending more to retard vegetation, and mar successful cultivation.

GREY DYE.—Grey is dyed with the same materials as black, but both the bath and mordant are used in a more diluted state. Sometimes a furnishing bath of archil or annatto is given, to soften and beautify them.

GREYHOUND.—The various points of this well-known hound may be stated as follows:—The head should be fine, long, and lean; the nose sharp, and the nostrils wide apart; the ear small, close, and falling; the



neck should be long, round, and flexible; the eyes should be large, upraised, clear, and strikingly bright; the chest should be broad, and the shoulders also stand wide apart from each other, loose and free. The legs should be straight and well-jointed; the sides strong; the loins broad, firm, and sinewy, but not fleshy; upper flanks loose and supple; hips wide apart; and the lower flanks hollow; the tail should be fine, long, and flexible, as well as hairy throughout, but especially so towards the tip. The texture of the coat should be soft and fine; the colour is not a material object, and there are various opinions respecting it. The breeding and rearing of greyhounds is to a great extent the same as that of other sporting dogs; especially observing that as greyhounds are peculiarly susceptible to cold, they should always be provided with sufficient warmth, to keep them in good condition and perfect health. The feeding of greyhounds forms an important part of training, and should be as follows; breakfast, half a pound of raw horseflesh by itself, and then a little ship biscuit. Dinner, two parts oatmeal, and one part flour, stirred with strong jelly of ox or calf's feet. This dietary may be varied thus. Breakfast, broken down toasted bread (consisting of two parts flour, one part oatmeal), eggs, and aniseed, half a pound of underdone horseflesh and the jelly. Dinner, firm oatmeal porridge; well-boiled harley and carrots; and the meat with which these were boiled broken up in the liquid. Greyhounds, in training, should be taken out for exercise in the forepart of each day, with a man on horseback. Daily rubbing or brushing is salutary for the greyhound, as it conduces to the firmness and strength of his limbs, and renders his hair and skin soft and supple.

GREY POWDER.—A preparation of chalk and mercury. The great and peculiar difference between the grey powder and all other medicinal preparations of mercury, lies in the fact that this, to a certain extent, is a mechanical mixture of the ingredients, all others being chemical compounds; it is consequently far less potent, more admissible for all ages, and in every way less hazardous in its exhibition. This fact will be better understood when it is known that the difference of one or two grains in the dose of many of the chemical preparations of mercury, may prove not only dangerous, but even fatal; whereas all the harm that could accrue from an excess in the prescribed quantity of grey powder, would be a brisk action on the bowels; which, unless extreme debility existed at the time in the patient's body, could by no possibility do harm, but more probably would result in benefit. The grey powder is prepared by rubbing three ounces of the pure mercury, with five ounces of prepared chalk, in a mortar, till every globule of the metal has disappeared; and when spread out on a sheet of paper, and examined through a magnifying glass, presents a uniform grey appearance, devoid of any glistening metallic particles. The mercury is then said to be killed, and the two previously inert ingredients converted into a product of medicinal value. Many hours, and even days, are necessary to effect this change, and completely obliterate all traces of the mercury: though the state of the atmosphere at the time has much to do in the labour or facility of preparing the powder. During the process of trituration or rubbing, a certain portion of oxygen is absorbed from the atmosphere, converting the mercury into an oxide, which imparts the dark greyish colour to the chalk; but the greater part is only mechanically, and very minutely, divided, and remains in its pure state—the product containing about one part of protoxide of mercury in every three parts of the powder. Medicinally considered, there are few preparations more safe or useful than grey powder; and in the diseases and ailments of infancy and childhood, no medicine that the mother can administer with more confidence and certainty of benefit, either alone or in combination; for, to its medicinal influence it adds the advantage of being devoid of taste or smell, and requiring a very small amount in bulk—under any age—for a dose. In all cases, and there are many, occurring in childhood, where it is necessary to correct the state of the secretions by acting on the liver, grey powder, by repeated daily doses for a short time, is invaluable. In scrofulous children, when the abdomen becomes enlarged and the body emaciated, this preparation of mercury forms the physician's chief dependence as a means of cure. Wherever an alterative or mild aperient is required, the grey powder forms an indispensable necessary in the treatment, and at whatever period of life, though especially serviceable in childhood. When given alone, the dose in infancy ranges from one to three grains,

according to age and the object sought to be attained; If as an alterative, one or two grains daily, for several days in succession, ending the course by an aperient. If intended to act on the bowels, the quantity should be at least doubled. From the decomposing power of liquids, the grey powder should be always given in some solid substance, as honey, jam, or other tenacious substance.

Alterative Powders.—Take of

Grey powder 20 grains.

Rhubarb powder 10 grains.

Mix, and divide into eight powders: one powder to be given every day to an infant from one to two years, and twice a day to one from three to four years.

Aperient Powders.—Take of

Grey powder 24 grains.

Scammony 16 grains.

Scalap 12 grains.

Mix, and divide into six powders: giving one to a child of two years; to one of four years two powders may be given at once, or a second powder repeated three hours after the first. In the same manner with other children; either let two powders be taken at once, and a third some hours later, or give one every three hours for three or more times. For the more specific use of the grey powder, see **ALTERATIVE MEDICINES, MESENTERIC DISEASE, &c.**

GRIDIRON.—This is one of the simplest of culinary implements. It should be kept scrupulously clean, and when used the bars should be allowed to get warm before the meat is placed on them, otherwise the parts of the meat resting on the bars will be underdone. The ordinary gridiron is placed over the fire; but there is another kind that hangs before the fire, with a pan at the bottom to catch the gravy.—See **BROILING.**

GROOM, DUTIES OF.—To the groom is committed the business of feeding and dressing the horses of his master's establishment; and for the performance of this duty practice and dexterity are essential. The first duty of the groom in the morning, which generally commences at six, is to clean the stable and feed the horses. The hay should be lightly put into the rack, and the usual feed of oats placed in the manger. The morning allowance of water is usually reserved until after dressing; but sometimes horses refuse to feed except they drink first, and then a small quantity of water should be given. Careful grooming is an essential requisite, both as regards the health and appearance of horses. After the application of the currycomb, the horse should be well rubbed, to remove all loose hairs, and again rubbed with wet hands, which will impart a glossy appearance to the coat. The mane, foretop, and tail should then be combed; and should the feet and legs be stained, they must be washed with soap and water, and trimmed with the scissors. Before the horses are put to the carriage, the brush and a cloth are to be passed over their coats to remove any dust; the wet sponge should be applied to the eyes, nostrils, &c., and the comb put through the mane and tail. The shoes ought to be examined, the harness then put on,

and the horses attached to the carriage. On those days when the carriage is not taken out, the horses should be exercised for a couple of hours every day. At noon the horses are fed and watered; again sometimes at four o'clock; and at eight in the evening a little hay is put into the rack for the night. When the carriage returns home, they should not be fed immediately if their work has been fatiguing, but wait until they are cool. If fed too soon, particularly if they have fasted for a long time, indigestion may be produced. In such case it is proper that they should be first rubbed down and dressed. If they are heated, the water used to wash their legs should be lukewarm, and they should be walked about till the temperature is lowered, before being put into the stable. When horses are much confined to the stable, their hoofs are apt to become dry and to crack; to prevent this, it is necessary to stop their feet occasionally during the night with some moist substance, such as a mixture of cow-dung with loamy earth.—See CURRYCOMB.

GROUNDSEL.—A plant that grows wild in waste grounds, on dry banks, wall-tops, &c. Cage birds, particularly goldfinches and linnets, are fed with the young buds, seeds,



and leaves, which are cooling, and have a salt herbaceous flavour. A weak infusion of groundsel is a common purge; a strong infusion is used as an emetic, and sometimes given to horses to free them from bots.

GROUSE.—This bird is to be found in most parts of England, but especially in Northumberland and Cumberland. In the highlands of Scotland they are also to be met with in large numbers, and supply the sportsman with an easy and profitable day's shooting. The best weather for shooting grouse is that which is dry, clear, and warm; wet makes them lie on the ground. The times of day best suited for grouse shooting are the morning and the evening, when the birds are in quest of food. The flight of grouse is generally about half a mile. Their favourite haunts when undisturbed

are those patches of ground where the young heathier is most luxuriant; and it is in this that they most frequently feed. During the middle of the day, the shooter should range the sunny side of the hill, and avoid plains. No species of shooting requires the aid of good dogs more than this; and in no sport does so much annoyance arise from the employment of bad dogs. The best dog for the moors is a well-bred pointer, not more than five years old, and well tutored. The setter is occasionally used with success; but if he cannot find water wherewith to wet his feet every half hour, he will not be able to undergo much fatigue. The law enacts that grouse may not be shot, taken, or pursued before the 12th of August, or after the 9th of December, without incurring a penalty.

GROUSE PIE.—Having picked and well cleaned as many grouse as will be necessary, season them with cayenne pepper, salt, whole pepper, and two or three cloves pounded; put a bit of butter into each bird, and lay them closely into a pie dish, with a little stock or good brown gravy, and glass of port wine; cover the dish with puff paste, and bake it for an hour and a quarter. If intended to be eaten cold, have ready a little rich veal gravy, and pour into the dish when it comes out of the oven.

GROUSE POTTED.—Clean the birds thoroughly, and season them with allspice, salt, mace, and white pepper. Rub each part well with this seasoning, then lay the breasts downward in a pan, and pack the birds as closely as possible. Put plenty of butter on them; then cover the pan with a close flour paste, tie a paper over, and bake. When cold, cut into small pieces, pack them closely in a large potting jar, press down, cover with batter, and tie securely.

GROUSE ROASTED.—In plucking the birds, handle them very lightly, draw them, and wipe the insides with a clean damp cloth. Truss the grouse as you would a pheasant, and roast them for about half an hour at a clear and brisk fire, keeping them basted almost without intermission. Serve them on a buttered toast, which has been laid under them in the pan for ten minutes, or with gravy and bread sauce only.

GROUSE SOUP.—Boil four grouse until tender; cut up the best parts of the birds into small slices, and set them on one side. Pound the inferior parts finely, until it may be pressed through a sieve into the stock; put into the stewpan six onions, three carrots, two turnips, three bay leaves, six cloves, an ounce of allspice, a few sprigs of thyme and marjoram, and two ounces of butter; fry them altogether until they become of a fine brown; then put them into the stock, and boil the whole for one hour. Mix two pounds of dry flour with cold water and put it into the stock; boil it for ten minutes, strain it through a sieve, put in the pieces of grouse which have been cut up, give the whole a boil up, and serve.

GROUSE, TO CARVE.—The grouse is so small that it will scarcely admit of disjoining, and it is usual to separate it at once into the breast portion and the back

and legs, which may be readily done without cutting, by inserting the fork to the former and raising it while depressing the latter. When this is done, the knife may be carried longitudinally through the breast, so as to divide it into two equal portions; after which the back and legs may be divided in the same way.

GRUB.—The common name of worms or maggots hatched from the eggs of beetles. Land newly brought into cultivation is generally most subject to the grub. The best way of destroying it is by frequent and thorough ploughings, and the application of lime in pretty large proportions in its causive or most active state; common salt, also, will answer the same purpose; irrigation is likewise beneficial in tending to destroy grubs. Sometimes grubs will infest orchard trees and fruit bushes in sufficient numbers to damage a whole crop; in these cases a bonfire should be made with dry stocks and weeds on the windward side of the orchard, so that the smoke may blow among the trees, and thousands will be thus destroyed.

GRUEL.—Mix in a basin two table-spoonfuls of oatmeal with a little cold water, then pour on it about a quart of boiling water; stir it well and let it settle for a few minutes; pour off the water into a saucepan, and boil it for ten or fifteen minutes, stirring it, and taking off the scum as it rises. Season with salt or sugar, according to taste. Milk may be used instead of water, if preferred. The best gruel for invalids or delicate persons is made from what are called Emden groats, which are the crushed oats deprived of their outer skin. These are very gently boiled for a long time, and being passed through a sieve, the gruel is then fit to eat, and is usually eaten with sugar, sometimes adding, when there are no inflammatory symptoms, a little sherry or brandy. As an article of diet, gruel is better calculated for occasional use than to be taken habitually, as when taken to excess, it has a tendency to impoverish the blood and induce cutaneous diseases.

GUANO.—A substance found upon certain small islands, especially in the South Sea, which are the resort of large flocks of birds, and chiefly composed of their excrement. As a manure, it possesses certain valuable properties beyond any other. The usual manner of applying guano is by first mixing it with six or seven times its weight of sandy loam, and then digging it into the ground before the crops are sown; when used for top dressing, it should be watered as soon as applied, unless the weather happens to be wet. When used diluted with water, the usual proportion is an ounce of guano to a gallon of water for kitchen crops, and half an ounce to a gallon for flowers.

GUARANTEE.—An undertaking to answer for the failure or default of another. No person is liable to answer for the debt, default, or miscarriage of another person, unless a written agreement or some memorandum in writing for such promise, shall be signed by the party making the promise, or some other person lawfully authorized by him for the purpose. In the construction

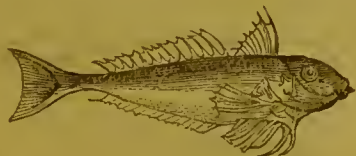
of a guarantee, it is a general rule that the surety shall not be bound beyond the extent of the express words of the engagement into which he has entered. A guarantee to or for a firm will cease upon a change of the members of a firm, unless it appear to be the intention of the parties that, by express stipulation or implication, the guarantee shall be binding notwithstanding the change in the firm. Every person who is surety for the debt or duty of another, who discharges his liability, is entitled to the assignment of all securities held by creditors.

GUARANTEE SOCIETIES have been established within the last few years, which take upon themselves the responsibility and liability above mentioned, charging a certain amount of premium, according to the amount of guarantee. Such societies are a great boon to persons compelled to furnish a guarantee, because there exists a natural reluctance on the part of one person to become surety for another; and besides, many persons, although occupying a good position themselves, have neither friends nor relations of sufficient means to become surety for another. Through this medium, also, employers are assured of the continued solvency of the surety, and the guarantee, instead of being subject to the change and instability attaching to an individual, becomes a permanent and valuable one.

GUARDIAN.—In law, generally signifies one who has the charge of the person, education, and property of children, or of any one labouring under some incapacity for managing his own affairs. A father is by nature the guardian of his children. On his death, the office devolves on those who may have been appointed by him. A guardian thus appointed supersedes all other guardians, except those by the custom of London, or any city or corporate town in favour of which an exception is made, and is entitled to the custody of the infant's person, and his estate real and personal. If persons, appointed as guardians by the father, decline to accept the office, the law appoints the nearest relatives on the father's side. In such cases, the estate only is intrusted to the heir apparent; the person being transferred to the custody of the mother if alive, or, if dead, to the nearest relatives on the mother's side. Guardians may also be appointed to a stranger for the management of an estate left to a minor by such stranger, or by a judge before whom a suit may depend, in which a father may have an interest adverse to his child: and in all cases where, from any cause, a person cannot manage his own affairs, and his relatives are unwilling or disqualified to act for him, the law, in one form or the other, provides a manager or guardian. In these last cases, security for the faithful discharge of his duty is exacted from the guardian, and he is accountable for the due management of his ward's property, and is answerable not only for fraud, but for negligence or omission. The guardianship of a father over his minor daughter is at an end when she marries a person who has attained majority, the husband being the guardian of his wife.

GUAVA JELLY. **ENGLISH.**—Strip the stalks from a gallon or two of the large kind of bullaces called the "shepherds' bullace;" give part of them a cut, put them into stone jars, and throw into one of them a pound or two of plums; put the jars into pans of water, and set them over the fire until they boil. Drain off the juice; pass it through a thick strainer or jelly bag, and weigh it; boil it quickly for a quarter of an hour or twenty minutes, take it from the fire, and stir in till dissolved three-quarters of a pound of sugar to each pound of juice; remove the scum with care, and boil the preserve again quickly from eight to twelve minutes, or longer, should it not then jelly firmly on the skimmer. When the fruit is very acid, an equal weight of juice and sugar may be mixed together in the first instance, and boiled briskly for about twenty minutes. When done it should be very transparent and firm; it should then be poured into shallow pans or moulds, and turned from them before it is served.

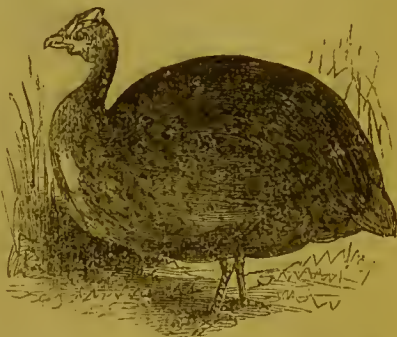
GUDGEON.—Augling for gudgeon is much practised in the hot summer months, when other more wary fish seek shelter in sequestered nooks, and secure retreats from the glare of a midsummer sun, until "evening's twilight gathering round" tempts them from their haunts to recruit exhausted nature. The rod should be nine or ten feet long, light and stiff, the line of gut, and the hook No. 12 for gentles, and No. 10 for worms; a running line should be used, as a



trout, perch, or barbel is frequently tempted to take the worm bait, and the two former are also attracted to the spot by the concourse of gudgeon drawn thereto by the use of ground bait or the rake by the angler. The ground bait should be carrion gentles or worms chopped up into small pieces. When fishing from a punt, gudgeon are attracted to the spot by using a strong iron rake attached to a long and strong pole, to displace the gravel at the bottom of the river, and thus enable the stream to disperse and carry down worms, larvæ, and small insects which had sought shelter in the interstices between the stones. The foregoing will show that within an inch of the bottom is the proper depth to swim the bait. If a punt is not available, walk into the river, where it is from two to four feet deep, with or without waterproof boots; large nails driven into the sole will prove useful; and commence stirring up the gravel with your feet, fishing before you, and as the fish leave off biting, again stir up the gravel (this also applies to the use of the rake). A shorter rod will do for this plan, which is very killing, and is called "mudding."

GUDGEON, TO DRESS.—This fish is exceedingly delicate and fine flavoured; the smaller sized gudgeon, especially, being but slightly inferior to white hait. There is but one way of dressing this fish to perfection, namely, by frying. Make an incision first beneath the gills, extract the inside, and carefully dry the fish on a clean cloth: then brush the fish over with egg rolled in fine bread crumbs, and fry it in lard, fresh butter, or oil.

GUINEA-FOWL.—Although this fowl is but seldom recognised by the keepers of poultry, there is no reason why it should not be included in every collection, for it is



useful and ornamental during its life, and when dead forms a desirable addition for the dinner table, at a time when all other poultry is scarce. The best way to begin keeping Guinea-fowls is to procure a setting of eggs from some friend or neighbour on whom you can depend for their freshness, and also, if possible, from a place where only a single pair is kept. A bantam hen is the best mother, she is lighter and less likely to injure them by treading on them than a full-sized fowl. She will cover nine eggs, and incubation will last a month. The food of the young should consist of ants' eggs (so called), hard-boiled egg chopped fine, small worms, maggots, bread crumbs, chopped meat or suet: whatever, in short, is most nutritious is their most appropriate food. This should not be offered to them in large quantities, as it would only be devoured by the mother bantam as soon as she saw that the little ones had for the time satisfied their appetites, or would be stolen by sparrows, &c.; but it should be frequently administered to them in small supplies. Feed them every half hour, as they possess an extraordinary power and quickness of digestion, and their growth is very rapid. A dry sunny corner of the garden will be the best place to coop the chicks with their bantam hen. As they increase in strength they will do no harm, but, on the contrary, a great deal of good, by devouring worms, grubs, caterpillars, maggots, and all other sorts of insects. By the time their bodies are little bigger than those of sparrows, they will be able to fly with some degree of strength. When they are about the size of thrushes, they should be transferred from the garden

into the orchard or shrubbery, to prevent their doing mischief to the flowers. During all this time they must receive a bountiful and frequent supply of food; oatmeal, cooked potatoes, boiled rice, anything in short that is eatable may be thrown down to them; they will even pick the bones left from a meal, with apparent relish. At a certain period they will have got beyond the management of their foster-parent, and will form a "pack" among themselves, prowling about in a body in search after food and insects. Birds thus reared on the spot where they are meant to be kept, are sure to thrive better and give less trouble than those procured from a distance, which sometimes will not remain in their new home, but wander about in search of their old haunts, till they either find them, or are themselves lost, destroyed, or stolen. In the case where a German cock and two hens are kept—the usual number—it will be found that though the three keep together, yet that the cock and one hen will be unkind and stingy to the other unfortunate female. In such cases the eggs of the despised hen will in all probability turn out failures; therefore, all those who wish to succeed with Guinea-fowls should match their birds in such a manner as is likely to conduce to their general well-being and happiness. An unerring rule by which the cock may be distinguished from the hen, is, that the latter uses the call note "come-back, come-back," accenting the second syllable strongly; while the cock has only the harsh shrill cry of alarm, which is common also to the female. The Guinea-fowl is one of the most prolific of known birds. Week after week, and month after month, sees no, or very rare, intermission of the daily deposit; and even during the process of moulting it will continue to lay as when in ordinary health. One objection to this bird is, that it is of a wild, shy, rambling disposition. It loves to wander along hedgerows, over meadows, through clover or corn-fields, and amidst copses and shrubberies; hence these birds require careful watching, for the hens will lay in secret places, and sometimes absent themselves from their accustomed haunts, until they return with a young brood around them. One disadvantage results from this, namely, that the bird will often sit at a late period of the year, and bring forth her brood when the season begins to be too cold for the tender chickens; besides which, a great portion of her eggs will be lost. The best plan is to contrive that the hens shall lay in a quiet, secluded place, and to give about twenty of the earliest eggs to a common hen ready to receive them, and who will perform the duties of incubation with steadiness. In this way a brood in June may be easily obtained. Guinea-fowl are in season from the middle of December till April, but are usually reserved till the latter part of that term, in order to occupy the gap caused by the deficiency of game. In order to fatten them, it is useless to attempt shutting them up, unless they have previously been made particularly tame, as they would sulk, pine,

and die, before they became reconciled to confinement, in spite of their extra diet. But if they have become familiar, the whole pack may be confined in company together in a rooiny outhouse, and be supplied with all the oats they can eat, with considerable advantage. The sure plan, therefore, is to keep them in high condition during the winter by liberal hand-feeding.

GUINEA-FOWL, TO DRESS.—The manner of killing Guinea-fowls is usually by dislocating their necks instead of using the knife, thus leaving the blood in them to remedy the natural dryness of their flesh. They should also remain in the larder as long as possible before being cooked. They must be young, or they will be scarcely eatable, and should never be more than twelve months old. They are trussed like the common fowl, with the exception that the head is sometimes left on and tucked under the wing. They are generally larded and roasted, requiring to be well done and taking about three-quarters of an hour.

GUINEA-PIG.—This is an extremely timid, delicate, docile, and elegant animal, and is chiefly kept for amusement by young persons. They are remarkably cleanly in their habits, but emit nevertheless a disagreeable smell, which renders their admission into the dwelling-house offensive. They possess amazing fecundity, bringing forth six or eight times in the course of the year, and from four to twelve young ones at a birth; beginning at the age of two months. Their coats are extremely beautiful, being sleek and glossy and variously coloured, black, white, orange, and mixtures of the three, called orange tortoiseshell; these latter are the most highly prized, particularly



where the dark colours predominate. The most appropriate place to keep them in, is a hutch similar to that used for rabbits; only somewhat smaller. Their ordinary food should be oats given twice a day, and sparingly, that the animals may not get cloyed and waste the grain; greenmeat should also form a part of their usual diet, particularly the wild sorts, as dandelion, sowthistle, plantain, &c.; they are also exceedingly fond of tea leaves, which, however, should only be given to them occasionally. They are also partial to parsley, carrots, and fruits of all kinds, especially apples; bread dipped in milk or water is much relished by them; of milk they are extremely fond, and never refuse water when offered to them. Though naturally tame and gentle, they are incapable of strong attachment. They affect dark and intricate

retreats, and seldom venture out of concealment when danger is apprehended. Some persons have an idea that rats have a great dread of Guinea-pigs, and are afraid to venture out of their hiding places in their presence; this supposition, however, is proved to be groundless.

GUM.—A vegetable product distinguished by solubility in water and insolubility in alcohol. Gum arabic, which is the produce of the *acacia vera*, may be taken as a sample of the purest kind of gum. As a medicinal agent this gum is valuable in colds and other affections, where it is necessary to shield the membranes from the effect of acrid substances; if, however, taken to excess it is liable to produce constipation.

GUM STARCH.—Pound two ounces of fine white gum arabic to powder, put it into a jug and pour on it a pint or more of boiling water, according to the degree of tenacity required; cover the jug and let it remain for the night. On the following morning, pour the liquid carefully from the dregs into a clean bottle, cork it, and keep it for use. A tablespoonful of this, stirred into a pint of starch which has been made in the usual manner, will give to shirt-fronts, waistbands, collars, &c., a fine gloss which not only enhances their appearance, but tends to preserve them for a longer period than ordinarily.

GUM SYRUP.—Boil two pounds and a half of loaf sugar in a pint of water; when the syrup boils, stir in the whites of six eggs, previously beaten up with half a pint of water; having skimmed the syrup, add a quarter of a pound of gum arabic previously dissolved in a quarter of a pint of cold water; boil for a few minutes; when about half cold, strain through a jelly-bag, and put into bottles. This preparation is chiefly used for confectionery, but a teaspoonful of it taken occasionally in cases of obstinate coughs and irritation of the chest and throat, is frequently found efficacious.

GUM WATER.—This preparation is used in a variety of minor domestic and household operations. It is usually made by simply dissolving gum arabic in water till it acquires the desired degree of strength; a better kind, however, may be made as follows: Put half an ounce of *gum tragacanth* into a wide-mouthed four-ounce bottle, pour upon the gum a quarter of a pint of hot water, let it stand for twelve hours, stirring it frequently, and then fill up the bottle with gin. This preparation will keep for years, and never become mildewed or offensive. When it becomes too stiff, a little more gin may be added.

GUN, CARE AND MANAGEMENT OF.—Every gun, if only moderately used, requires occasionally to be taken entirely to pieces. Twice a year the breech or breeches of a gun which is much used should be taken out; the pivots and locks will require more frequent attention. The following instructions relative to the care and management of the gun will be found useful. *In taking off the mainspring*, first put the lock on full cock; next cramp the mainspring, then let down the cock, and the mainspring will fall

off. When the cock is to be put on again, first let the cock be left down; then hook the end of the mainspring on the swivel or chain; then move it up and place it into its position on the lock-plate; this done, unscrew the cramp, and the lock is once more fit for action. When the hammer is to be taken off, first shut down the hammer carefully, cramp the spring, until by shaking the lock the hammer is heard to rattle; then take out the screw behind, and the hammer will fall off. To put it on again, replace it in its former situation; turn in the screw, and set the spring free. If the hammer-spring is to be taken out, the hammer and mainspring must be released, in order to reach the screw behind; the hammer spring must then be cramped, till it is taken out and put on again to receive the hammer. *In taking to pieces the small works of a gun-lock*, be careful to keep the screws distinct. Commence by taking off the mainspring, next unscrew and take out the sear, by half-cocking the lock; clasp the forepart of the lock, firmly pressing the thumb at the same time against the hinder part of the cock, directing it forward, while the sear and sear-spring, being now pressed together with the forefinger and thumb, will facilitate the taking out of the sear-screw. Then undo the two screws, take off the bridge, unscrew and take out the sear spring; next unscrew and take off the cock, which will readily separate from the tumbler if it be gently tapped or shaken; this done, take out the tumbler, and the process is finished. *When it is required to put the lock together again*. First put the tumbler in its place and screw on the cock; next do the same by the sear spring; set on the bridge with the two upper screws, put in the sear, let down the cock, to admit of putting on the mainspring, and the operation is complete. The locks do not require to be taken off every time a gun is used; once a fortnight is quite sufficient. Put a little fine oil to the parts where there is friction; but if the gun has been used on a wet day, the lock should be taken off, cleaned, and oiled immediately. *Gun cleaning* is practised in a variety of ways, but the following directions will probably be found as good as any; place the breech end of the barrels in a bucket, in which there is cold water about three inches deep; then, after wetting the sponge, cloth, or tow, introduce the rod into the barrels, and work it well; next apply the wire brush attached to the cleaning rod with some clean hot water, which will take out all the lead. Wipe the rod and the outside of the barrels dry, and set the latter upright, muzzle downwards, for two minutes to drain, after which rub them perfectly dry. Wipe the barrels out clean, then pass an oiled rag down the inside, and rub over the outside, leave them a little only, which will prevent rust. The frequency with which a gun should be cleaned depends upon circumstances. Some guns foul sooner than others. Some powder also fouls more than others; and as a rule small shot fouls a gun sooner than large shot. Under all circumstances, a gun should be wiped out after

every twenty shots; its more effective use after the operation amply compensating for the trouble. *When a gun is put by for the season*, care should be taken to place it where no damp can come to it; the best preventative for this evil, is to have iron rods made of the length and diameter of the barrel, leaving just sufficient room to cover the rod with kerseymere, or some other woollen material; the rod thus furnished should be placed within the barrel; in addition to this, a little wax should be placed over the touch-hole, and no damp can then possibly penetrate. Never put a gun by for the season without having taken the breech out. Remove, clean, and thoroughly dry the screws, lubricate the threads with pure tallow and return them. *To remove rust from the outside of the barrel*, adopt the following method: Have an ashken rod turned a few inches longer than the barrel, and nearly the size of the bore. Let one end of the rod be cut lengthwise, so as to make a slit of six inches long; into which insert as much fine emery paper as will completely fill up the bore of the barrel, taking care in folding the paper tightly round the wood, that the emery surface is outward. Force it into the barrel by screwing it downwards from the top to the bottom; repeat this process until the barrels show a perfectly clean and polished surface. Sand and other coarse materials should never be used for this purpose, as they abrade the surface of the barrel, and consequently injure it.

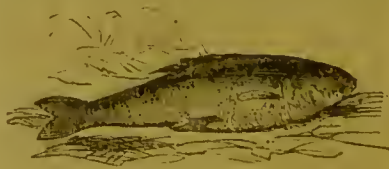
GUN, PRECAUTIONS RESPECTING.—In putting away a gun, the greatest care is necessary in order to prevent accidents; as a rule it is always better to fire the gun off previously to entering the house; but as this is sometimes to be objected to, owing to the disturbance and alarm which it occasions, the following precaution should at any rate be observed. Having arrived at your door, remove the cap of the gun, if a percussion piece, or if a flint throw out the priming, let down the spring of the lock, draw the ramrod, and dropping it down the barrel, put the gun away into a closet or other safe place of your own, or suspend it in your study high above the reach of any one, and all must be safe, at least against ordinary risks.

GUN, USE OF.—See SHOOTING.

GUNPOWDER.—A substance composed of three ingredients, saltpetre, charcoal, and sulphur. The quality of gunpowder is best estimated by actual trial of its power and cleanliness in use. It should be dry, hard, and free from dust; the grains should be of a uniform size, and glossy, and the colour a dark grey, or brownish grey, not perfectly black. A very little placed on a piece of paper and fired, should instantly explode with a flash, and neither leave a perceptible residue on the paper, nor burn it. Dried by the heat of boiling water it should not lose more than $\frac{1}{4}$ to $\frac{1}{5}$ of its weight. From the aptitude which gunpowder has for absorbing moisture, it is extremely difficult to make it retain its original strength without extreme care. Gunpowder used in this deteriorated

state, has also a tendency to foul the gun-barrels. On all occasions, therefore, where gunpowder has been exposed to the air, it should be dried previously to being used, and especially so when the atmosphere is known to be superabundantly charged with moisture. Gunpowder should be bought in casks only, and as fresh as possible. In keeping it, it should be guarded as carefully as possible from exposure to the air. The common tin case, however closely prepared, is not sufficient for the purpose, unless it be rendered waterproof, and closed either by a soft velvet cork, or a fine threaded screw; the former is preferable. An excellent plan is to divide large quantities into smaller ones, and put them into bottles, each containing about four ounces; which being corked and sealed prevents exposing more than is wanted for immediate consumption. Sportsmen and others should take care to purchase their gunpowder from such sources as will secure its genuineness; if possible, from the maker direct, but at any rate through a channel having a direct communication with the powder-mill. The method resorted to by powder merchants for restoring damaged gunpowder is, to put part of the gunpowder on a sail-cloth, and add to it an equal weight of good powder; the two are then mingled together, then dried in the sun, barreled up, and set by in a dry place. When it is found to be very bad, it is restored by moistening it with vinegar or brandy; then beat fine and sifted; and to every pound of powder is added an ounce, or an ounce and a half, or two ounces (according to its stage of decay) of melted nitre. These ingredients are afterwards well moistened, thoroughly mixed, and granulated in the ordinary way. *The law relating to gunpowder* enacts that no one is to keep more than two hundred pounds of gunpowder, nor any person, not a dealer, more than fifty pounds, in the cities of London and Westminster, nor within three miles thereof; nor within any other city, borough, or market town, within one mile thereof; nor within two miles of the royal palaces or magazines, or half a mile of any parish church, on pain of forfeiture, and two shillings for every pound. Licensed mills are, however, exempt.

GURNARD.—A salt-water fish. It has a scaly body of a uniform shape, compressed laterally, and attenuated towards the tail. The head is broader than the body, and slopes towards the snout, where it is armed



with spines; the upper jaw is divided, and extends beyond the lower, the eyes are near the top of the head, large and prominent, particularly the upper margin of the orbits. The dorsal fins are unequal, the first short and high, the second long and sloping.

Many of the species utter a peculiar noise when taken, and some of them are provided with pectoral fins sufficiently large to enable them to spring out of the water. It is a fish that affords excellent food.

GURNARD BAKED.—Fill the interior of the fish with veal stuffing, sew it up with packthread, and truss it with the tail in its mouth; lay them in a baking dish with thin slices of bacon over them, and bake for half an hour or more (according to size) in a hot oven. When done, serve with a sauce made as follows: put a tablespoonful of chopped onions into a stewpan, with a tablespoonful of vinegar, place this over the fire for a few minutes, add half a pint of melted butter, two tablespoonfuls of ketchup, and two of water, reduce until rather thick, season with a little pepper, cut the fillets of an anchovy into strips, put them into the sauce, which pour around the fish, and serve.

GURNARD BOILED.—The fish may be boiled either with or without stuffing, in very salt water; it will require rather more than half an hour; serve with anchovy sauce.

GURNARD BROILED.—Cut off the heads of the fish, dip the bodies into melted butter with salt, and broil them over a moderate fire. Serve them either with plain anchovy sauce, or with a sauce made as follows: put a piece of fresh butter, a little flour, and a leek into a saucepan, with salt, pepper, and nutmeg, moisten with vinegar and water, add two anchovies, keep it on the fire, stirring it constantly until the fish are done, pour the sauce over them and serve.

GUT. an article used by anglers, is manufactured from the silkworm, and can be obtained at all tackle shops. The clearest, brightest, and roundest links are the best; it is used for that portion of the line nearest to the hook of lengths varying from one foot to four yards; and to distinguish its appearance from the fish, it is frequently dyed to a colour as nearly approaching that of the water it is used in as possible. A brown colour is produced by soaking it in coffee grounds; a blue colour by steeping in ink, diluted with water as required; and a green colour by the use of water in which a piece of green baize has been boiled.

GUTTA PERCHA.—A substance formed by the concrete juice of a tree growing in the Indian Archipelago. In order to procure this substance, the largest-sized trees are felled, the bark stripped off, and a milky juice, which exudes from the lacerated surfaces, is collected and poured into a trough, formed by the hollow stem of the plantain leaf. On exposure to the air, the juice quickly coagulates. The gutta percha arrives in this country in lumps or blocks of several pounds' weight, but these often contain impurities, introduced for the purpose of increasing its weight. When pure, the slips are transparent and somewhat elastic, varying in colour from a whitish-yellow to a pink. It is purified by being submitted to the action of hot water, and is then ready for use. The purposes to which gutta percha is applied are numerous. It resists the action of water, and is at the same time a bad conductor of electricity; it is therefore

employed for enclosing the metallic wires used in the Electric Telegraph. The efficiency of the Submarine Telegraph is largely due to this valuable substance. Manufacturers and agriculturists have applied gutta percha to use in bands and straps for machinery, tubes, buckets, &c. It is also used for household decoration; for the manufacture of various articles of daily use; and employed even in the fixing and stopping of teeth. A solution of gutta percha in chloroform or bi-sulphuret of carbon forms an excellent dressing for incised wounds, and a protection for abraded surfaces, burns, &c.

GUTTA PERCHA SOLES, TO FASTEN.—Dry the old sole, and make it rough with a rasp, after which put on a thin coat of warm solution with the finger, rub it well in; let it dry, then hold it to the fire, and, whilst warm, put on a second coat of solution thicker than the first; let it dry. Then take the gutta percha sole, and soak it in hot water until it is soft; take it out, wipe it, and hold the sole in one hand and the shoe in the other towards the fire; when sufficiently melted, apply the gutta percha sole to the shoe, beginning at the toe and proceeding gradually towards the heel. When it has been on half an hour, pare it evenly all round. The solution should be warmed by putting the quantity required for use into a cup, and placing it in hot water, taking care that none of the water mixes with the solution.

GUTTER.—Gutters form a part of the roofs of houses, and by them the rain and snow water is let down by a pipe into the street drain. Great attention must be paid to these gutters on the roof, not only with regard to their original construction, but that they are always kept in proper repair; otherwise if they are imperfectly formed, or improperly neglected, the water will penetrate into the house, and injure the apartments. In order to carry off the water readily, gutters should be made with a slope of from half to three-quarters of an inch in the yard. When gutters are made of lead, the sheets should never be joined by solder, because, if confined, the expansion in warm weather would cause the lead to crack; they should be connected by drops, a kind of step of two inches, made in laying the boards for the lead; the lead over this is only hammered close, and not soldered. When wet appears in the ceiling of the upper story, it is frequently owing to defective construction, and sometimes to a crack in the lead. The whole should, therefore, be carefully examined by a plumber; but if the defect arises from the lead of the gutter having been originally cut too narrow, there is no effectual remedy but taking it up and putting down wider lead. *Cast iron gutters*, as substitutes for leaden ones, are found economical and effective, and are more particularly adapted for ridge and furrow hot-house roofs.

GYMNASTICS.—A species of exercise tending to develop the frame, and strengthen the muscles, and especially adapted for the human body before it has become "set." The best age to commence the practice of this exercise is about eight years. The prac-

tic should be gentle at first, and gradually increase in proportion to age and strength. Gymnastics are better practised before meals than after them, the early part of the day being perhaps the best time of any. Care should be taken not to lie on the damp ground, nor stand in a draught, nor drink cold water immediately after the exercises have been gone through; these exercises consisting of every variety of active employment of the body, including walking, running, jumping, leaping, &c. Of all the corporeal exercises, *jumping* is one of the most useful; to jump with ease and confidence, one should always fall on the toes, taking especial care to bend the knees on the hips; the upper part of the body should be inclined forwards, and the arms extended towards the ground. In jumping we should hold the breath and never alight on the heels. In *leaping*, the object is to pass over an obstacle; in this case, also, the breath should be held, while the hands should be clenched, and the arms pendant. To facilitate this exercise a leaping-stand may be



formed, as seen in the engraving. The high leap should be practised, first standing, and then with a short run; in the standing leap the feet must be kept close together; and in the leap with a run, the leaper should take about twelve paces, and go fairly over the



cord, without veering to either side, and descending on the ball of the foot. *Vaulting* is performed by springing over some stationary object, such as a gate or bar by the aid of the hands which bear upon it. To perform it, the vaulter may approach the object with a slight run, and placing his hands upon it, heave himself up and throw his legs obliquely over it. The legs should be kept close together; while the body is in suspension over the bar, the right hand supports and guides it, leaving the left hand free. *Climbing the rope.* To do this, cross the feet and hold the rope firmly between them; move the hands one

above the other alternately, and draw the feet up between each movement of the hands. In the sailor's manner of climbing,

the rope from the hands passes between the thighs, and twists round one leg, just below the knee and over the instep, as shown in the annexed figure; the other foot then presses upon the rope, and thus an extremely firm support is obtained. In climbing trees both the hands and feet are to be used, but the climber should never forget that it is to the hands that he has to trust. He should carefully look upwards, and select the branches for his hands, and the knobs and other excrescences for his feet; he should also mark the best openings for the advance of his body; he should also be particularly cautious in laying hold of withered branches, or those that have suffered decay at their junction with the trunk. In descending, he should be even more cautious than in ascending, and hold fast by his hands. *In climbing the wooden ladder,* the learner should seize each side of the ladder, and by moving his hands alternately, ascend as far as his



strength will permit. He should next try to climb the ladder by the rungs, by bringing the elbow of his lower arm firmly down to the ribs previously to pulling himself up by the other. In performing this exercise the legs must be kept close, and as straight and steady as possible. *Climbing the inclined board.* For this purpose, the board should be about two feet wide



and resting at an angle of thirty degrees. The climber must seize both sides of the

board with his hands, and placing his feet flat in the middle, ascend by moving his hands and feet alternately. When the gymnast has, through practice, acquired power and precision in his movements, the plank may be raised until it is almost perpendicular. *Climbing the pole.* The pole should be about nine inches in diameter, and firmly fixed in the ground in a perpendicular position. In mounting, the pole is to be grasped firmly with both hands, the right above the left. The legs should alternately grasp the pole in the ascent by means of the great toe, which is turned towards the pole. In descending, the friction is thrown on the inner parts of the thighs, and the hands are left comparatively free.

PARALLEL BARS. Are two pieces of wood, from six to eight feet in length, and about four inches square, the edges rounded. For lads they are fixed at about eighteen inches apart, and supported by two round standards, fairly fixed in the ground, from three to four feet high, according to the stature of the boys. By the aid of these bars several feats may be performed, among which are the following: *Balancing.* Being placed between the bars and in the centre, put your hands right and left on the bars at the same time. After a little jump upwards, preserve your equilibrium on both wrists, the legs close; this is called the first position. Then communicate to your body a gentle movement of balancing from behind, forwards, and continue this several times, the body moving as it were on a pivot. This should be practised until the body swings freely backwards and forwards. *To rise and sink.* Being in equilibrium in the middle of the bars, place the legs backwards, the heels



close to the upper part of the thigh. From this position, come gently down, till the elbows nearly meet behind the back, then rise up gently without any impulse or touching the ground with your feet. *To kiss the bar behind the hands.* In the same position as before, bring the body gently down between the bars without touching the ground with your knees; kiss the bar behind each hand alternately, and then rise up in the first position.

THE HORIZONTAL BAR. In the exercises on the horizontal bar, the first position is assumed by taking hold, with both hands, of the side of the bar towards you, and, raising yourself until you can look over it. When you can perform this easily, place the hands

on the further side of the bar, and raise yourself as before. In the next exercise, place your hands on each side of the bar, then raise the body off the ground and endeavour to pass from one end of the bar to the other, by making a succession of small springs with the hands, and afterwards by passing the hands alternately; the legs being, in the meantime, kept close and as straight as possible. *Kicking the bar.* To perform this, hang by the hands and draw



up the feet very slowly until the instep touches the pole. This is difficult at first, but is soon learned; do not kick or jerk violently, or you may injure yourself. Next practise hanging by the right arm and right leg, while the left hang down; then by the right arm and left leg, and left arm and right leg. When perfect in these exercises, take hold of the bar firmly by the right hand, throw the right leg over the bar, hold on steadily by the joint of the knee, and next raise the body and get the left armpit over the bar; then by a little exertion you will be able to assume a riding position on it. *Circling the bar.* In doing this, hang by the hands, and curl the body gently over



the bar. If too difficult at first, stop for minute or two and try something else, and after an interval try it again; it will soon be learned.

THE BALANCING BAR. Foremost among the preliminary exercises of balancing are the following: Standing on one leg, holding one foot high in the hand, kissing the toe, and sitting down. The two first, explain themselves sufficiently; to kiss the toe, lift one foot with both hands and raise it towards the chin, which should be slightly lowered to meet it; in sitting down, both arms and one leg should be thrust forward, and the other leg bent until the feat is performed; after which, he should carefully rise up, keeping his arms and legs out-

stretched, and steadily preserving his balance all the time. In dry weather, the soles of the shoes should be damped, as then the upper bar is smooth and slippery. Mount the bar either from the ground, or from a riding position on the bar itself; in the latter case, place the right foot on the bar, keeping the heel close to the upper part of the thigh, and allow the left foot only to hang perpendicularly down, with the toes pointing to the ground; then stretch both arms forward, and gradually rise on the foot, before you begin to walk. First, try to walk with assistance, then alone, balancing by extending the arms, and afterwards with the arms folded behind. When you can walk steadily and easily, endeavour to turn round on the bar, first trying at the broad and then at the narrow end, and lastly walk backward. When two persons in walking the bar, wish to pass each other, they should join arms, place their right feet forward, and turn quite round, by each stepping with the left foot round the right of the other. Other exercises are performed through the medium of the horse, the chair, &c.; and an exercise termed giant strides, consists of a pole set up with four ropes, one of which each pupil grasps, and vaults or steps out in a circle, increasing the velocity by degrees, until at length a complete circle is made in the air without touching the ground with the feet.

II.

HABEAS CORPUS.—In English law a celebrated writ, used for various purposes, but chiefly put in force for the release or bailing of a person who considers himself illegally imprisoned, or entitled to be discharged on bail. The *Habeas Corpus Act* enacts—1. That on complaint and request in writing by or on behalf of any person committed and charged with any crime (unless committed for treason or felony expressed in the warrant), or as accessory, or on suspicion of being accessory before the fact, to any petty-treason or felony, plainly expressed in the warrant, or unless he is convicted or charged in execution by legal process; the Lord Chancellor, or any of the twelve judges in vacation, upon viewing a copy of the warrant, or affidavit that a copy is denied, shall, unless the party has neglected for two terms to apply to any court for his enlargement, award a *habeas corpus* for such prisoner, returnable immediately before himself, or any other of the judges; and, upon the return being made, shall discharge the party, if bailable, upon giving security to appear and answer to the accusation in the proper court of judication. 2. That the writ of *habeas corpus* shall be returned, and the prisoner brought up, within a limited time, according to the distance, not exceeding in any case twenty days. 3.

That officers and keepers neglecting to make due returns, or not delivering to the prisoner or his agent, within six hours after demand, a copy of the warrant of commitment, or shifting the custody of a prisoner from one to another without sufficient reason or authority, shall, for the first offence, forfeit £100, and for the second offence £200, to the party grieved, and be disabled to hold his office. 4. That no person, once delivered by *habeas corpus*, shall be re-committed for the same offence, on penalty of £500. 5. That every person committed for treason or felony shall, if he require it the first week of the next term, or the first day of the next session of *oyer* and *terminer*, be indicted in that term or session, or else admitted to bail, unless the Crown witnesses cannot be produced at that time; and if acquitted, or if not indicted and tried in the second term or session, he shall be discharged from his imprisonment for such imputed offence; but that no person, after the assizes shall be opened for the county in which he is detained, shall be removed by *habeas corpus* until after the assizes are ended, but shall be left to the justice of the judges of the assize. This is the substance of that great and important statute, which extends only to the case of commitments for such criminal charges as can produce no inconvenience to public justice, by a temporary enlargement of the prisoner; all other cases of unjust imprisonment being left to the *habeas corpus* at common law. But even in these latter, it is expected by the Court that the writ should be immediately obeyed, otherwise an attachment will issue. By this law, a complete remedy is provided for removing the injury of unjust or illegal confinement; a remedy rendered the more necessary because the oppression arises in some cases equally from oversight as from design. For it has happened in England, and might so happen again, but for the strict enforcement of this law, that during the temporary suspension of the statute, persons apprehended upon suspicion have suffered a long imprisonment merely because they were forgotten.

HACKNEY CARRIAGE.—Under this term are included every carriage, except a stage carriage, or a carriage impelled by the power of steam, or otherwise than by animal power, with two or more wheels, which is used for the purpose of stauding or plying for hire, at any place within the distance of ten miles from the General Post Office in the City of London. All hackney carriages must have four plates, namely, on the back, each side, and inside, to contain the name and address of the proprietor. Names and places of abode of proprietors, and number of plates, to be registered at Guildhall, in the City, under a penalty of forty shillings. The weekly duty of ten shillings to be paid monthly, on the first Monday of every calendar month. Plates to be delivered upon the discontinuance or revocation of licence, under a penalty of £10. Carriages, horses, harness, and other articles may be seized for duties and penalties incurred. Concealing plates, or preventing persons inspecting and taking number thereof, a penalty of £5.

Penalty of £10 for keeping or using a hackney carriage without licence, or without plate, and not delivering up plate when recalled. Penalty on the driver of a carriage plying for hire without plate, £5; or if the owner, £10. Forging the Stamp Office plate, a misdemeanour, subjecting to fine or imprisonment, or both. Upon complaint before a justice, the proprietor may be summoned to produce the driver, and failing so to do, subjects to a penalty of forty shillings. Any person desirous of obtaining a licence to keep, use, or let to hire a hackney carriage, must apply in writing to the Commissioners of the Police of the Metropolis, who, if on inspection, deem the carriage fit, and in proper condition for public use, shall grant the necessary certificate. Upon the production of such certificate at the office of *Inland Revenue*, a licence will be granted. After grant of licence, police may inspect carriages and horses; and if unfit for use, licence may be suspended. Penalty for using them after notice of suspension, £3 for each day.—See CAB-FARES, CAB-HIRING.

HADDOCK.—This fish is an inhabitant of the northern seas of Europe, and visits our coasts in December. The haddock resembles the cod in some of its properties. The small ones when boiled are less firm than the cod, and rather watery, but the larger fish are firm, and of a fine flavour. They are better for being hung up for a day or two with a sprinkling of salt. *Finnan haddocks* are cured at Findhorn (pronounced Finnan), a fishing village near to Aberdeen, famous for this fish. They are split, dried for a day or two in the sun, and hung up for a few days on wooden spits up a wide chimney filled with smoke from a fire made of peat and sea-weed, so as to receive a very slight flavour. They may be obtained in London; but great care must be employed in selecting them genuine. An imitation of these is said to be effected by laying the fish in salt for two hours, and then washing them over with pyroligneous acid, and, lastly, hanging them in a dry place for a few days. Haddocks may be kept in salt-water ponds, or preserves, and will become so tame as to feed from the hand. They are in season during the last three months of the year.

HADDOCK BAKED.—Clean and season three or four haddocks; place them evenly on a flat dish, with a border of paste or of mashed potatoes, neatly marked. Glaze with an egg, and place bits of butter here and there over the fish, and a piece inside of each. Garnish with potato balls, and bake for half an hour. Pour a little melted butter and ketchup over the dish, and serve.

HADDOCK BOILED.—Fill a fish kettle with cold spring water, to which add a little salt, vinegar, and horseradish, which improves the look of the fish, and prevents the skin breaking. Serve hot with oyster sauce.

HADDOCK BROILED.—Either score or skin the fish, and split it up; brush it over with a feather dipped in oil, peppered and salted, lay it whole upon the gridiron without either egg or crumb of bread, and eat, if fresh, with a squeeze of lemon; if dried and salted, they are eaten as a relish for break-

fast or tea, with the addition of a piece of butter spread over them.

HADDOCK DRIED.—Scrape the fish, and take out the entrails; cut the fish open considerably below the vent, so that the blood may be entirely scraped from the backbone: cut off the points of the tails, take out the eyes and gills, wash the fish, and put some salt into the bodies; let them remain for twenty-four hours, then run a string through the eyes, and hang them in a dry place.

HADDOCK FRIED.—When perfectly fresh, take off the head and skin, and cut out the bones very carefully; divide each side into two, wash them well, and lay them in a cloth to dry; have the yolk of an egg beat up in a plate, dip the fish into it, and strew over it sifted bread crumbs, mixed with chopped parsley that has been boiled; fry the fish in fresh beef dripping or lard; garnish with fried parsley, and serve.

HADDOCK PIE.—Clean, skin, and wash the haddocks; take off the heads and tails, and cut the fish into two or three pieces; season them lightly with finely minced onion, parsley, salt, and pepper; make forcemeat balls with a small boiled haddock. Put into the bottom of a dish some bits of butter, add the fish and forcemeat balls, with rather more than half a pint of white stock, and a little lemon-juice; put puff paste round the edge of the dish, and cover it with the same.

HADDOCK SMOKED.—Clean the haddocks thoroughly and split them; take off the heads, put some salt on the bodies, and let them lie all night; hang them in the open air the next morning for two or three hours, then smoke them in a chimney over peat or hardwood sawdust. When there is not a chimney suitable for the purpose, they may be smoked in an old cask, open at both ends, into which put some sawdust with a red-hot iron in the midst; place rods of wood across the top of the cask, tie the haddocks by their tails in pairs, and hang them on the sticks to smoke. During the process, the heat should be kept as uniform as possible, as it spoils the fish when the temperature alternates between hot and cold. When done they should be of a fine yellow colour, which they should acquire in twelve hours at the farthest.

HADDOCK SOUP.—Take the meat from a haddock, pound it in a mortar, with half a pint of shrimps shelled; shred some parsley, and pound the whole with the crumb of a roll previously soaked in milk; form the mixture into balls with an egg, season with mace and pepper; and stew down two or three haddocks into good broth; strain it, take out the meat, press it through a sieve, boil it with parsley roots, thicken the soup, and serve with the forcemeat balls.

HADDOCK STEWED.—Skin and cut off the heads of three or four haddocks, divide each haddock into three or four pieces, and wash them clean. Put a tablespoonful of butter, with two tablespoonfuls of flour, into a frying-pan; fry till brown; mince two small onions, season them with pepper and salt, and put them in the pan with as much boiling water as will nearly

cover the pieces of fish: let it boil, put in the fish, and when one side is done, turn the other. Dish it hot, and pour the sauce over it; garnish with parsley. Omit the onions, if the flavour be not liked, and substitute a tablespoonful of ketchup and one of lemon-pickle.

HADDOCK, TO CARVE.—Deprive the fish of their heads and tails, by passing the slice across in the directions 1-2; then



divide them down the back, so as to assist each person to a side; but if less be required, the thicker end should be given, as it is more esteemed. If the roe be asked for, it will be found between 1-2.

HAGGIS.—A dish peculiar to Scotland, and one that is prepared in a variety of ways. The Scotch haggis, as it is generally known, is made as follows:—Clean a fat sheep's pluck thoroughly. Make incisions in the heart and liver to allow the blood to flow out, and parboil the whole, letting the windpipe lie over the side of the pot to permit the phlegm and blood to disgorge from the lungs; after ten minutes' boiling, change the water for fresh. The lights cannot be overboiled. A half-hour's boiling will be sufficient for the rest; but throw back half the liver to boil, till, when cold, it will grate easily. Take the heart, the half of the liver, and part of the lights, trimming away all skins and black-looking parts, and mince them together finely. Mince also a pound of good beef suet, grate the other half of the liver. Have four mild large onions, peeled, scalded, and minced, to mix with the haggis mince. Have also ready a large tea-cupful of finely-ground oatmeal, toasted slowly before the fire till it is of a light brown colour, and perfectly crisp and dry. Spread the mince on a board, and strew the meal lightly over it, with a high seasoning of black pepper, salt, and a little cayenne. Have a sheep's paunch perfectly cleansed, and see that there be no thin part or cracks in it that will endanger its bursting. Sometimes two bags are used by way of security, or a cloth as an outer ease. Put in the meat with half a pint of good beef gravy, or as much strong stock. Be careful not to fill the bag too full, but allow the meat and meal room to swell; add the juice of a lemon or a little good vinegar; press out the air, and sew up the bag; prick it with a long needle when it first swells in the pot, to prevent bursting; let it boil slowly for three hours. For *Lamb's Haggis*, slit up all the little fat tripes with scissors, and clean them thoroughly. Clean the kernels also, parboil the whole, and cut them into little bits. Clean and shred the web and kidney fat, and mix it with the tripes. Season with salt,

pepper, and grated nutmeg. Make a thin butter with two eggs, half a pint of milk, and the necessary quantity of flour. Season with chopped chives or young onions. Mix the whole together. Sew up the bag, which must be very clean, and boil for an hour and a half. For *Calf's Haggis*, take the web of fat, the udder, the kidney, and best part of the calf's pluck. Blanch and boil the udder, and the split kidney and pluck, for twenty minutes. When cool, mince the whole. Blanch and chop two dozen sprigs of fresh young parsley, a few young green onions, and a few mushrooms. Stew the herbs in butter for three or four minutes, and moisten them with a little stock. When it becomes dry, season with salt and pepper. Mix the herbs and minced meat together, and put the mixture into a bag as before directed. Mix meanwhile the beaten yolks of two eggs with half a pint of rich and highly-seasoned veal or beef gravy, and two tablespoonfuls of pounded and soaked rusks. Put this into the bag with the other ingredients; add a little lemon-juice, and when the bag is sewn up, toss it about to blend the materials. Boil for three hours.

HAIR, ARRANGEMENT OF.—The manner in which the hair of the head should be arranged is an important subject of consideration. This is especially the case with females, whose hair has always been considered a personal ornament, which is capable of adding to the beauty of the face, or compensating in some cases for the absence of beauty, by its luxurious and its appropriate arrangement. The arrangement of the hair, in a physiological point of view, is governed by a law as precise as that which regulates any other of the secondary vital functions. Thus, on the head, the hair radiates from a single point—the crown—to every part of the circumference, making a gentle sweep behind towards the left, and in front to the right. In making our toilet, this natural arrangement of the hair should be interfered with as little as possible. Combing it or braiding it in an opposite direction to that which it naturally assumes, is highly prejudicial to its healthy growth, and if long persevered in, leads to its premature and rapid decay. The arrangement of the hair, in its artistic sense, is governed by certain general principles in relation to the face and figure. In all cases the oval should be sedulously observed by any and by all means of art. When the line of beauty does not exist, let the hair be so humoured that the deficiency shall not be remarked. In dressing of the hair, certain styles are adopted, which are termed the fashion for the time being; but as the fashion is never confined to one style, but always admits of some three or four, every female has it in her power to adopt that style which appears to her the best becoming. Nevertheless, the arrangement of the hair in many cases betrays an unpardonable ignorance of the general principles of taste, and a want of judgment in its individual application. For instance, nothing is more common than to see a face which is somewhat too large below, made to look grossly large and coarse

by contracting the hair on the forehead and cheeks, and then bringing it to an abrupt check, whereas such a face should have the forehead and cheek enlarged, and the hair suffered only partially to fall over, so as to shade and soften down the lower cuberance. The present prevailing style of brushing the hair back from off the forehead, although favourable to some faces, is in many instances detrimental to the form and expression of the features. This is the case where a large forehead and masculine features exist, and which are thus exaggerated and made to appear unnaturally obtrusive and prominent. In such cases it would be much better to arrange the hair in a band about the cheeks, gracefully sweeping around the ears, and terminating with a few careless curls behind. In the accompanying engravings *fig. 1* represents a narrow brow and broad base visage, rendered more obtrusively prominent by dressing the hair close to the head, and turning it back. *Fig. 2*



displays the same face, much more advantageously set off by a classical mode of treatment. In *fig. 3* it will be observed that the thinness and length of the face are considerably increased by the hard mechanical lines imparted to it by the injudicious arrangement of the hair. *Fig. 4* furnishes a



correction of the error, and certainly gives to the face a more pleasing and plastic expression. The large curvilinear lines of the

hair tend to carry out the natural sweep of a full face; in fact they repeat the original defective form. Dressing the hair close to a round plump face is therefore inappropriate; but on the other hand, if the hair is allowed to break up into small curves, the play of line will be found to impart a great improvement. *Fig. 5* illustrates a style of dressing the hair exceedingly unbecoming to a short stout person, as it shortens both face and neck. *Fig. 6* displays an obviously



better result produced by narrowing and giving apparent length to the facial lines. In cases where a plait or coronet is worn, it should not be placed too low on the forehead, as by dividing the forehead it may be said to cut up and consequently mar its breadth and beauty. All extreme styles of wearing the hair should, as a matter of course, be avoided, as they are offences against good taste and propriety, and only serve to excite ridicule. Among these errors may be mentioned bringing the hair close about the eyes, and letting it fall in long straggling loops below the chin; piling it up to an inordinate height, and sticking combs or enormous pins in it; parting it on one side, as worn by men; and other modes more or less eccentric and unbecoming. But even these defective arrangements are to be excused rather than one oversight which some females, with inconceivably bad taste, are apt to foster, namely, slovenliness. Sometimes the hair of females is to be seen hanging about the face and shoulders in a dishevelled state. With others it presents that bristly condition arising from the absence of the brush known as "fuzzy;" whilst some females are not ashamed to be seen in public with their hair screwed up in paper, as though they had just arisen from their beds. It ought to be certainly known that each and all of these offences against taste and propriety, not only detract from personal beauty, but have with them certain disagreeable associations, and never fail to produce a repulsive effect upon persons of ordinary refinement and good breeding.

HAIR-BRUSH.—In making the toilet two good hair-brushes are essentially necessary. The best kind of hair-brush is that where the bristles are so arranged that they penetrate the hair and act upon the skin. A brush made upon this principle and which will be found very efficient, is easily procurable. After brushes are used they should be gently tapped together, to free them of the dust, dandruff, &c., and then

carefully put by, where they cannot be come at by other and possibly less cleanly persons. *When hair-brushes require washing,* never use soap. Dissolve a piece of soda in warm water, and set the brush in it in such a manner that the water only covers the bristles; the brush will almost immediately become clean and bleached. Dry the brush in the open air with the bristles downwards, and it will be found to be as firm as a new brush.

HAIR-DYEING.—The dyeing of the hair entails the necessity of a disagreeable process being frequently undergone, say at weekly intervals, in order to ensure the effect intended. This fact is sufficiently obvious, since the dye acts only on the hair above the level of the surface, and the hair that grows afterwards is naturally of the objectionable colour. It should also be remembered, that the powerful chemical agency employed to change the colour of the hair, may act detrimentally in some other direction, and derange some important functions at the expense of personal decoration. These drawbacks do not alter the main fact of the possibility of altering the colour of the hair by the application of certain ingredients, and the following is the process by which the end in view is attained:—Take some lime and reduce it to powder by throwing a little water upon it, mix this with litharge, in the proportion of one-fourth to three-fourths of lime; then sift it through a fine hair sieve. To apply it, put a quantity of it into a saucer, pour boiling water upon it, and mix it up with a knife to the consistence of thick paste; divide the hair into thin layers by the aid of the comb, and lay the mixture thickly into the layers to the roots, and all over the hair. When the head is completely covered, lay over it a piece of damp blue or brown paper, then bind a handkerchief closely over it, draw a nightcap over all, and retire to rest. In the morning, brush out the powder, wash the hair thoroughly with soap and warm water, then dry thoroughly, and apply oil or pomatum to it. A less disagreeable mode than the foregoing, and perhaps an equally efficacious one is as follows:—Take hydrosulphuret of ammonia, one ounce; solution of potash, three drachms; distilled or rain-water, one ounce. Mix and put it into a small bottle, labelling it No. 1. Then take nitrate of silver, one drachm; distilled or rain-water, two ounces; dissolve and label No. 2. In using it apply solution No. 1 to the roots of the hair with a tooth-brush, continuing the application for fifteen or twenty minutes. Then separate the hair into whisks, and brush in solution No. 2, allowing the liquid to come in contact with every part. In this latter application, care must be taken that solution No. 2 does not penetrate to the skin, or a permanent dark stain will be produced. Previously to applying the dye the hair must be freed from all grease; whilst in order to test the effect of the dye before applying it, a lock of hair may be cut off, and treated according to the foregoing directions; failure will then be guarded against and success guaranteed.

HAIR OILS.—*Rose oil.* Olive oil, one pint; attar of roses, ten drops. Essence of bergamot being much cheaper than the attar of roses, is very frequently substituted. *Macassar oil.* Oil of belin, one pint; oil of nuts, one pint; spirits of wine, one gill; essence of bergamot, a quarter of an ounce; essence of musk, a quarter of an ounce; essence of Portugal, a quarter of an ounce; attar of roses, ten drops. Infuse in a bottle near the fire for two or three hours; then set the bottle for a week, agitating it frequently.—See **BANDOLINE**; **POMATUM**.

HAIR PRESERVATION OF.—Under ordinary circumstances the hair may be preserved by the most simple means. In a sound and healthy constitution, the best preserver and beautifier of the hair is regular and careful cleaning. As a general rule, *the head cannot be too much brushed*, brushing acting as an active and healthy stimulant upon the skin, rendering the functions more healthy, and, as a consequence, the production of hair more easy and its maintenance more certain. On this account, hard and penetrating brushes are useful, but in using them it should be borne in mind that it is the *head* which requires brushing more than the hair; while, therefore, the brush is actively applied to the roots of the hair, the surface should be brushed with a light and gentle hand. Occasional washing with pure water is to be recommended, providing the hair is not very long, so as to render drying difficult. To assist in drying it thoroughly, dip the brush into a very little hair powder and brush it out again; after that, a little pomatum may be brushed in. With regard to *cutting the hair*, it is an operation which should not be performed too frequently, nor delayed too long; in ordinary cases it would be as well to have a small portion of the hair removed every month or six weeks. Where the hair is in an unhealthy condition, especially where much has fallen off, and a partial and impoverished growth has risen up to represent that which is lost, the short and impoverished hairs should be carefully and persistently cut, with the view of giving them bulk and strength, and improving their growth. The frequent plucking out of withered hairs is also productive of benefit, as the process is necessarily accompanied by much stimulation of the skin, which promotes the growth of the hairs individually and generally. *The excessive use of grease in dressing the hair*, is a common error which cannot fail to be productive of injurious consequences. There is a natural oil secreted by the hair, which in a healthy state should supply the requisite amount of moisture; sometimes this is defective, and the hair becomes dry and harsh, it is then proper to supply the deficiency by a little pomatum or oil. When the artificial grease is applied in excessive quantities, it produces a matting of the hair, prevents the pores of the scalp from acting freely, and thus prevents the supply of natural moisture from being communicated freely to the hair. *The kind of grease to be used*, should be animal fats in preference to vegetable oils, the latter being apt to become rancid, and not possessing such

active stimulant properties as the former. *The use of soap* in washing the hair, should be cautiously and sparingly observed, as it is apt to change the colour and texture of the hair. A little white soap dissolved in spirits of wine, is more effectual and less injurious than soap alone. After this the hair should be well washed with pure water. When *greyness of the hair* shows itself, it is an indication of want of tone in the hair-producing organs, and if this tone can be restored, the hair will cease to change, and at the same time further change will be prevented. The plan of cutting as previously recommended, combined with judicious plucking, tends very much to prevent the extension of greyness. *Keeping the head too much covered* is calculated to prove injurious to the hair, as by this means an excessive amount of heat is generated, which tends to enervate and relax the hair-producing organs, and consequently weaken and thin the hair; for this reason the wearing of nightcaps is to be condemned, and the practice of wearing the hat throughout the day is attended with similar evil consequences. *Curling the hair*, especially when frequently resorted to, is a most pernicious custom, the inordinate amount of heat that is employed to produce the desired effect, drying up the natural oils, and otherwise injuring the roots and texture of the hair. *Sudden heats and chills* of all kinds are also productive of ill consequences, and in short whatever accident or operation the hair is subjected to, widely differing from its normal state, must produce, more or less, those diseases and that decay to which it is peculiarly liable. In every case it should be remembered, that the preservation of the hair depends not only on local stimulation, but also on constitutional treatment. This truth is the more to be insisted upon, as a common notion prevails that the mere application of certain specifics will remedy defects without any other aid. Above all, the advertised nostrums which boast of being able to effect such extraordinary results, are not to be relied upon, and in many cases should be cautiously avoided. The simple truth is, that these specifics owe their boasted productive and restorative powers to precisely the same principle that attends the simplest formula, namely, the stimulation of the skin; and the application, therefore, must be governed by the same laws, and attended with the same results in the one case as the other.—See BALDNESS.

HAKE.—A fish taken in considerable numbers in our seas, and sometimes used by the people dwelling on our coasts; but it is seldom brought inland and is not generally esteemed as an article of food. Nevertheless hake possesses nutritious qualities, and is easily digestible.

HAKE FRIED.—Hake is in general considered best fried, because it has otherwise an insipid taste. Cut a moderate sized hake into cutlets, lengthwise, about the size of ordinary veal cutlets, dry them well with a cloth, brush them over with egg and bread crumbs, and fry to a light brown; serve hot on a napkin with a garnish of fried parsley.

HALIBUT.—A large fish resembling the turbot somewhat in flavour, but much coarser; it is sometimes caught weighing more than a hundredweight; the best size is, however, from twenty to forty pounds, as beyond this extent the fish becomes coarse. The most esteemed parts are the flukes over the fins, and the pickings about the head; but on account of its great bulk, the fish is commonly cut up and sold in pieces of a few pounds weight.

HALIBUT BOILED.—Put the fish into the fish kettle, with the back undermost, cover it with cold water, and add to it a handful of salt. When it begins to boil, skim it carefully, and then let it just simmer till it is done. Drain it, garnish with horse-radish or parsley, and serve with plain melted butter, or with egg sauce.

HALIBUT FRIED.—Cut the fish into slices, and proceed as directed with HAKE.

HAM BAKED.—Soak the ham for an hour in water, take it out, and wipe it perfectly dry, cover it all over with a paste such as is made for a pie, and bake it in a moderately heated oven till the paste is of a deep brown colour. Hums, thus dressed, will have a richer flavour, and keep much longer than when boiled in the ordinary way.

HAM BOILED.—For a ham weighing twelve pounds, allow a quarter of an hour to the pound for boiling it; when of a larger size they will require a little longer time in proportion; during the boiling, keep it well covered with water; and when done, peel off the rind, powder baker's raspings over it, dress the knuckle bone with a frill made of white pepper, and serve.

HAM BROILED.—Cut ham into thin slices, and broil on a gridiron. If the ham is too salt, soak the slices in water before broiling, and afterwards dry them well with a cloth.

HAM COLD.—Procure a small ham of about nine pounds in weight, and soak it in cold water for about ten hours; then let it simmer for three hours by the side of the fire; when done, take it out and let it remain till cold; then cut off the skin as thinly as possible, but without leaving traces of it; let a piece remain upon the knuckle about two inches and a half in breadth, decorate the part with a festoon or vandyke of paper, carve the fat neatly to form a shell, and glaze it over lightly; garnish with savoury jelly; and decorate the dish with a few bunches of fresh parsley.

HAM ESSENCE.—This condiment may be obtained from an undressed ham, or from a ham which has been boiled; the first will give the most perfect essence of the meat; the last may be the most economical. Take a pound of the undressed lean of a ham, cut it into small pieces, and put it into a stewpan with sufficient water to cover it; let it simmer till it is about three parts done; then add to it a pint of boiling water, and boil it till it is tender; strain it through a sieve, and take off all the fat; then boil it till it is reduced to about a quarter of a pint, and when cold put it into a bottle for use.

HAM FRIED, WITH EGGS.—First ascertain that the frying-pan is delicately clean; this may be known by melting a little fat on the pan, pouring it out, and wiping the pan briskly while still hot. The tenderness of the ham is improved by soaking the slices for a few minutes in lukewarm water, just previously to being dressed; they must afterwards be wiped quite dry in a cloth. Put the ham into a pan, and let it remain until nearly fried, draw it on one side, break the eggs on the edge of the pan, and slip them gently in; ladle the frying fat over them with an iron tinned spoon. When the eggs are done on the under side, place the ham on a hot dish, and either turn the eggs, or hold them before the fire for a minute, to take the raveness off from the upper side. Trim them as they lie in the pan; then take them up with a slice, and drain the grease off before dishing them with the ham. The dish is served either with the eggs lying on the slices of ham or with the eggs in the centre, and the ham, arranged neatly around them.

HAM PATTIES, WITH CHICKEN.—Skin and mince very finely, the breast or white fleshy parts of a chicken that has been either roasted or boiled, and about half the quantity of lean ham. Have ready in a small saucepan, a little good gravy, extracted from bones or trimmings, thickened with a bit of butter rolled in flour, add a little grated lemon-peel, white pepper, salt, a very little cayenne, and a teaspoonful of lemon-juice. Stir the mince in this till quite hot, fill up the patty-pans which have been previously lined with paste, cover with a crust, and bake to a light brown.

HAM PATTIES, WITH EGG.—In these, bread is used for paste. Scoop out part from thick slices of a quartern loaf; fill the patty-pans with ham finely minced, and lay a poached egg on the top. Bake till done.

HAM PATTIES, WITH VEAL.—Mince finely about six ounces of ready-dressed lean veal, and three ounces of ham; put it into a stewpan with an ounce of butter rolled in flour, half a gill of cream, half a gill of veal stock, a little grated nutmeg and lemon-peel, some cayenne pepper and salt, a spoonful of essence of ham, a little lemon-juice, stir this over the fire for some time, taking care that it does not burn; and when sufficiently done, fill up the patty-pans, and bake.

HAM PIE.—Half boil a ham, skin it, and take out the bone; fill the space with a rich forcemeat, and season the ham with pepper, mace, cinnamon, and cloves, pounded and well mixed; put this into a raised crust made of an oval shape, and lay over it a few bay leaves and some slices of fat bacon; cover it with a crust, and bake it for four or five hours.

HAM POTTED.—To each pound of cold lean ham, add six ounces of cold roast veal. Mince these together finely; and afterwards pound it in a mortar with half a pound of fresh butter, which must be added by degrees. When thoroughly beaten, strew over it a teaspoonful of freshly pounded mace, a small nutmeg grated, and the third of a

teaspoonful of cayenne pepper well mixed together. When perfectly pounded, press the meat into small pottling-pans, and pour clarified butter over the top. If kept in a cool and dry place, this meat will remain good for a fortnight or three weeks.

HAM SAUCE.—Mince the lean part of a dressed ham, and then beat it into a pulp; stew it over a slow fire for half an hour in good gravy sufficient to cover it; then add some sweet herbs, pepper, and some beef gravy, and stew for half an hour longer. Cover it slowly during the stewing, and when done strain off any fat there may be upon it, and strain it through a hair sieve. This sauce is employed for those dishes that require to have a savoury and piquant flavour imparted to them.

HAM STEWED.—Soak a small ham for about three hours in cold water; boil it slowly for the usual length of time; trim it and put it into a stewpan, with some slices of veal underneath, with carrots, parsnips, and parsley, chopped, a seasoning of pepper and salt, and two or three bay leaves; add a quart of rich gravy, and let the ham simmer for about three hours; then take it up, and serve it with its own sauce, the fat having been previously well skimmed off.

HAM TOAST.—Mix with some lean ham grated, the yolk of an egg beaten up, and a seasoning of pepper; put some clarified butter into a frying-pan, and fry some slices of bread, which place before the fire afterwards to drain; then fry the ham mixture, cover the slices of bread with it, and serve.

HAM, TO CARVE.—Serve it with the back upwards, sometimes ornamented, and generally having the knuckle bone frilled with paper. Begin in the middle by cutting long and very thin slices from *a* to *b*, con-



tinuing down to the thick fat at the broad end. The first slice should be wedge-shaped, in order that all the others may be cut slantingly, which gives them an inviting appearance. Many persons, however, prefer the hock at *a*, as having more flavour; in which case it is cut lengthwise from *c* to *d*.

HAM, TO CHOOSE.—Hams with short shanks are best. To test the freshness of the meat, insert a knife under the bone, and if it comes out clean and smells fresh, the ham is good; but if the knife is daubed, and has a rank and disagreeable odour, the ham is bad.

HAM, TO CURE.—Choose the short thick legs of well-fed hogs. To each large ham allow half a pound of bay salt, an ounce of

saltpetre, half a pound of coarse sugar, half a pound of common salt, a quarter of a pound of pepper, and an ounce of coriander seeds. Pound the ingredients, and beat and mix them well; but first rub in about six ounces of the salt and the saltpetre, and after two days, drain and rub in the remainder of the salt and the spices. Rub for half an hour; lay the hams in a trough, keep them carefully covered, and baste them with the brine every day; turn them occasionally, and rub the brine well in. When this is done, hang the ham in a cool dry place where there is a thorough current of air, and let it remain there until it is perfectly dry; then remove it into the store closet, and lay it by in clean straw. *Another method* is as follows: Rub the ham well with common salt, and drain for three days; then dry it; and for a ham weighing eighteen pounds, take half a pound of moist sugar, half a pound of salt, and an ounce of saltpetre. Mix these ingredients, and rub the ham well with it; put it into a trough, and treat as other hams; but in three days pour a bottle of good vinegar over it. The ham will be ready in a month after this for drying, which operation is performed as previously directed. The smoking of hams is effected over the fumes of green birch, oak, broom-tops, oak-sawdust, or any perfumed wood.

HAM, TO PRESERVE.—The most effective method of preserving hams is, to brush over the whole of the cut parts with a paste made of quicklime and water; this will keep out the flies; but as it will not readily wash off before dressing, some little waste is entailed in removing it, and renders the method, therefore, open to this objection. The next best plan is to sew up the ham in canvas, which will also prevent the flies from contaminating the meat. In any case the ham should be hung in a dry but cool room, out of the reach of the fire, which causes the fat to turn rancid. There should be a thorough ventilation through the apartment, without draught. Where there is no convenience for hanging, the ham should be cured in wood-ashes or straw.

HAMBURG BEEF.—Set a brisket of beef over the fire in a saucepan full of cold water; when it boils, skim well, then take out the beef, let it cool, and rub in three handfuls of salt, and two teaspoonfuls of saltpetre; beat it with a rolling-pin for half an hour; put it into a pickling tub, strew over it a small handful of salt, let it lie for four days, then turn it; add the same quantity of salt as before, and let it lie for four days more, after which sew it up in a piece of linen, and let it hang in smoke for a fortnight.

HAMMER.—A well-known tool, and one that is frequently called into requisition for household purposes. The best kind of hammer for these latter uses is that made wholly of iron, with the ordinary head or front, a nail-extractor behind, and the extreme portion of the handle fashioned as a chisel; several operations may thus be accomplished with this one tool.

HAND GLASS.—A portable glass case used for sheltering cauliflowers and other plants in winter, and during early spring, or to retain a regular supply of moisture to cuttings, and to otherwise preserve them until they have taken root. The most durable and convenient are made with cast iron framing of the form shown in the engraving, and are frequently constructed with



moveable tops, as here represented; but the only advantage which this affords is, that several of the lower portions may be placed upon each other, to protect any tall-growing shrub in severe weather, otherwise they are more troublesome to move, and more liable to break than if made entire.

HANDKERCHIEF.—Handkerchiefs are made of silk, cotton, and linen. Silk is the most durable, and preferred for common wear. White handkerchiefs are made of lawn or cambric; French cambric is considered the best. Handkerchiefs should be always marked with the owner's name or initials, as they are articles which are exceedingly liable to be mislaid.

The *Etiquette of the handkerchief* is as follows: Always use a white handkerchief on occasions of full dress, let it be of fine texture, and if ornamented with a pattern, it should be a neat one, and the colours subdued. In carrying the handkerchief, hold it freely by the hand in the centre, allowing the corners to form a fanlike expansion; do not roll it into a ball, twirl it into a rope, or twist it into fantastic shapes. Avoid using it too much, and especially refrain from doing so during meal-times; but if compelled to use it, observe extreme delicacy, turn the head away from the table, and make as little commotion as possible. If the handkerchief be scented, apply a moderate portion of perfume only; excess in this particular is associated with vulgarity.

HANDS, CARE OF.—It is acknowledged, by common consent, that dirty and coarse hands are marks of slothfulness and low breeding; while, on the contrary, clean and delicate hands are evidences of cleanliness and refinement. The person who has much manual labour to perform, cannot, of course, be expected to keep his hands of that delicate shape and texture, which another person, whose employment is light, may do. But, at the same time, it is always possible, under any circumstances, to keep the hands in that state during the intervals of labour, so that they shall not appear displeasing to the eye. To promote the *softness and whiteness* of the skin, mild emollient soaps, or those abounding in oil, should alone be used, by which means, also, chaps and chilblains will generally be avoided. The coarse strong kinds of soap, or those abounding in alkali, should,

for a like reason, be rejected, as they tend to render the skin rough, dry, and brittle. The immersion of the hands in alkaline lyes, or strongly acidulated water, has a like effect. *Roughness of the skin* may generally be removed by a little sand being mixed with the soap, or by rubbing the hands with pumice stone previously to applying the soap; in this operation, care should be taken not to allow the gritty particles to come into contact with the nails, or they will scratch them. *Dirt from the hands* is more effectually removed by warm water than cold; the hands, however, are liable to become dirty sooner afterwards, and perhaps the best plan is, to remove the dirt with warm water, and afterwards rinse the hands in cold. *Washing the hands too frequently* has a tendency to discolour them with a brown or tawny hue. Under ordinary circumstances it will be sufficient to wash the hands three times a day, namely, on rising, before dinner, and on retiring to rest. After washing, the hands should be carefully dried with a moderately coarse towel; this will promote a free circulation through them, which will ultimately tend to enhance their appearance. Exposure to cold winds and rain is detrimental to the appearance of the hands, and gloves should always be worn. *Fruit and ink stains* may be eradicated from the hands, by immersing them in water, slightly acidulated with oxalic acid, or a few drops of oil of vitriol, or to which a little pearlash or chloride of lime has been added; observing afterwards to rinse them thoroughly in clean water, and not to touch them with soap for some hours, as any alkaline matter will bring back the stains. The hands may be *preserved dry* for delicate work, by rubbing a little club moss, in fine powder, over them. *Hands that perspire, and are inordinately hot*, may arise from some temporary derangement of the system, or from a constitutional peculiarity; this may be partially remedied, by inserting the hands into a water-jug full of water, and lowering them gradually until the elbows reach, letting them remain at this point for two or three minutes; this operation will, in general, keep the hands pleasantly cool for some hours afterwards. In conclusion, it must be observed that an over-anxious cure for the state of the hands is to be deprecated. Some persons who are possessed of a small and delicate hand are so vain of it that they are constantly displaying it in an obtrusive manner, which is very offensive to the looker-on. And in some instances the fear of putting the shape and outline of the hand out of form, is so great, that every kind of work is avoided, and even accomplishments, such as the harp, piano, and guitar, are avoided, for fear of expanding the hand, and flattening the extremities of the fingers; this is a preposterous error, for the beauty of the hand does not alone consist in whiteness and a statue-like contour, but in certain indurations, which may be termed "expression," and which are imparted by the pursuit of suitable occupations, and appropriate accomplishments.—See CHAPPED HANDS, CHILBLAINS, WARTS, &c.

HANDWRITING.—See PENMANSHIP.

HANGING, RECOVERY FROM.—As hanging is a very frequent means of committing suicide in this country, it is highly desirable that all persons should be put in possession of the best remedies for restoring animation to a body so found; and that their services may be directed in a proper and beneficial course to the unhappy person, it is necessary that all should know the physiological cause of the suspended animation, so that their efforts may be directed on sound principles, and with scientific views of affording aid. In the first place, the cause of partial or complete death by hanging is not, as erroneously supposed, the consequence of a broken neck, and the pressure of a dislocated bone of the vertebral column on the spinal marrow; for if such were the case, no person could ever by any possibility recover; as surgical art has never yet, nor can discover a means of reducing a luxation of the spinal vertebrae. The cause, then, of death by hanging, results entirely from the pressure of the rope or ligature employed on the large veins returning with their impure blood from the head to the heart; these vessels are called the jugular veins, and the effect of this pressure or obstruction is to cause a rapid collection of blood in the veins of the head face, and on and in the brain. The arterial supply of blood to these parts being still the same, and the discharging channels blocked up, causes a rapid distension of the veins, which goes on for a few seconds till the delicate texture of which their coats are composed, being unable to bear further distention, bursts, and their contents are effused into the cavities of the brain, where it immediately presses on the origin of all the vital nerves, and produces that disorganization which results in death; the person dying from apoplexy or venous effusion on the brain. At the same time the blood having been checked at the points of external pressure, forms a clot in the jugular veins, of itself presenting a barrier to the return of blood, should the ligature be removed. *Treatment.*—Immediately cut down the body, or hold it up while another cuts the cord and remove the stricture from the throat; lay the body on its back, bleed from one or other of the jugular veins, or from both arms at once; open the waistcoat and dash cold water in sudden splashes on the face and chest, apply hot bricks close to the soles of the feet, imitate artificial breathing by inflating the lungs by a pair of bellows through one of the nostrils, closing the lips with the hand, and then by pressure on the stomach, expelling the air. As soon as a sufficient number of tiles or bricks can have been heated, place them in a row under the spine, and let the body rest on them; rub the neck sharply where most discoloured with sweet oil and brandy, to cause absorption of the clot formed by the pressure, and place hot bottles or heated bricks between the thighs, and finally extend the friction of oil and brandy with or without hartshorn, over the region of the heart and stomach. These means vigorously applied, without confusion, but with despatch, and

in regular order, will, if persevered in sufficiently long, restore animation if any spark of life is left in the body. There is but one other means, the most powerful, but unfortunately the least available, and that is electricity or galvanism. When this agent can be procured the galvanic current is to be passed from the back of the neck and discharged through the stomach, or made to traverse the chest. To recapitulate: the moment the body has been taken down, and the pressure removed, while the bottles are being filled with water and the bricks or tiles placed in the fire to heat, bleed as directed to the extent of twelve or twenty ounces, dash the cold water on the face and chest, and having dried the latter, using the embrocation vigorously, while the lungs are being inflated, and as soon as possible bring into operation the efficacy of heat to the spine, feet, and thighs, continuing at short intervals the artificial respiration, the friction, and cold effusions on the face.

HARE BAKED.—To bake whole, prepare as for roasting, putting a few pieces of butter, and a little milk into the dish; bake it in a moderate oven, and baste it several times during the baking. Another method of baking a hare, is to cut it up, season it with pepper, salt, and dress it with a little butter, and then bake it for about three hours in a covered jar or pan.

HARE BOILED.—Put the hare into salt and water, together with a beef marrow-bone and a piece of bacon; when the hare is nearly done, take it out; bruise some peas, boil them in the broth; take out the beef bone, put in the hare, and boil again till the peas are done, then strain; and serve the hare with the clear stock poured over it.

HARE BROILED.—Cut off the legs and shoulders of cold dressed hare; flatten and season them highly; broil them on a quick clear fire; troth with cold butter, and serve them hot with venison-sauce.

HARE CAKES.—Mince the best parts of the hare with a little firm mutton-suet. Season the mince highly. Pound it in a mortar, and make up the cakes with raw eggs, as small cakes or sausage-rolls; flour and fry them, or bake them in a Dutch oven.

HARE COURSING AND SHOOTING.—The hare is naturally a timid animal, and extremely swift in motion when pursued by dogs. Hare hunting requires no ordinary capacity to overcome its difficulties. In the first place, a hare, when found, generally describes a circle in the course, which is in itself not only more difficult to follow, but it naturally brings her upon her foil, which is the greatest trial for hounds. Secondly, the scent of the hare is weaker than that of any other animal hunted, and it is always fainter the nearer she is to her end. When the hare is started, those engaged in hunting her cannot keep too quiet; for if she be greatly alarmed, she is very apt to be headed back, and the dogs are rendered liable to overrun the scent every instant. Instead of pressing closely upon the dogs, it is better to keep wide of them. Through the whole of the run the hounds should be left almost

entirely to themselves, nor should they even be much halloed. If the hare doubles, let the dogs hunt through the doubles. On high roads and dry paths the huntsman should always be doubtful of the scent, nor give his dogs much encouragement; but when a hit is made on either side, it is then right to encourage them by cheering. Thick hedges form favourite hiding places for the hunted hare, they should, therefore, be well beaten for some distance before the hounds; but this should be done by an attendant, for if the huntsman beat the hedge himself, the hounds will be on the watch, and the hare is likely to be elopped. When hares set off down the wind, they rarely return; and hounds cannot be pushed on too much, particularly when the hare is sinking. *Hare shooting* is generally practised in connection with shooting other game, a true sportsman rarely taking the field for the express purpose of shooting the hare. If, however, one should run before the sportsman or cross his path, and the temptation is irresistible, let the sportsman aim at her head, and she will be a more certain shot, and much cleaner cleaned than by any other aim; do the same, also, if she be running in a straight line from you. If you have a double gun, and the second barrel is loaded with shot one or two sizes larger than those in the first barrel, give her that; she will be cleaner killed in that way, and will certainly be pulled up at any distance within sixty yards. When a hare is making towards you, it is better not to shoot until she approaches very close, otherwise her skull will ward off the shot.

The law relating to the taking or killing hares, enacts: that if any person shall, in the night-time, take or kill any hare in any warren or ground lawfully used for the breeding or keeping of hares, whether enclosed or not, every such offender shall be deemed guilty of a misdemeanour; and if any person shall unlawfully and wilfully in the daytime take or kill any hare, in any warren or ground, or shall at any time set or use therein any snare or engine for the taking of hares, ever such offender being convicted thereof before a justice of the peace, shall forfeit and pay such sum of money, not exceeding five pounds, as to the justice shall seem meet: provided always, that nothing herein contained shall affect any person taking or killing in the daytime any conies on any sea-bank or river-bank in the county of Lincoln, so far as the tide shall extend, or within one furlong of such bank.

HARE FRIED.—When the hare is skinned, lay it on a gridiron till heated through; then quarter it, and fry it to a nice colour in lard; soak some toasted bread in beef stock and white wine, with pounded ginger and cloves; strain it, add a little verjuice; and serve up the hare with butter, sugar, mustard, and lemon-julee.

HARE HASHED.—Skin and stuff a hare, tie some thin slices of bacon over it, and spit it; set it before the fire, and half-roast it; then cut it in pieces, and put it into good beef gravy; simmer it for two hours, then add a gill of port wine; let it stand a little

time longer over the fire, and then serve it with currant-jelly.

HARE JUGGED.—Cut up the hare, and put it into an earthen pipkin, with one quart of stock gravy, a large onion stuck with cloves, pepper, and salt, and a slice of lemon. Cover it close; set it into a pan of boiling water, and keep it boiling for three hours, until the hare is tender; then pour the gravy into a saucepan; put into it a glass of port wine, and a little more stock gravy, if there be not sufficient; season with pepper and salt, and thicken with flour; boil it up and pour it over the hare, and serve immediately.

HARE MINCED.—Mince the flesh of cold dressed hare finely, laying aside bones, &c.; season with salt, pepper, and mixed spices. Mix it up thoroughly with a little water or stock; and, having browned some butter in a saucepan, put them into it; and mash them well with a wooden spoon, till they are nearly ready, to keep them from running into lumps. Put more gravy to it, stew for twelve or fifteen minutes, and serve.

HARE PIE.—Cut a hare into pieces; season it with pepper, salt, nutmeg, and mace. Put it into a jug with half a pound of butter; close it, set it in a pan of boiling water, and make a forcemeat with a quarter of a pound of scraped bacon, two onions, a glass of red wine, some crumbs of bread, a bunch of sweet herbs, and the liver of the hare cut small. Mix this with the yolks of three eggs, raise the pie, and lay the forcemeat in the bottom of the dish. Then put in the hare, together with the gravy extracted from it; put on the lid, and bake it for an hour and a half in a moderate oven.

HARE POTTED.—Let the hare hang for some days; cut it into pieces; bake it with a little beer at the bottom of the pan, and some butter on the top; pick the bones and sinews from it; having strained it from the gravy, beat it in a mortar with the butter from the top of the gravy; add salt, pepper, and pounded cloves. Put it into pots; set it in a slack oven for a few minutes, and pour over it clarified butter; let it stand to cool, then tie it down; it will thus keep a long time.

HARE ROASTED.—Stuff the hare with the following mixture:—Bread crumbs, suet, the liver parboiled, pepper, salt, grated lemon-peel, parsley, lemon-thyme, nutmeg, and the yolks of two eggs, all chopped and mixed together. Put this inside the hare, and skewer it up; boil the hare for an hour, then take it up and roast it for an hour, by which means it will be thoroughly done without being over-roasted. Make a gravy by taking a pint of stock gravy, a little flour to thicken it, a tablespoonful of ketchup, half a gill of port wine, two tablespoonfuls of currant jelly, a little pepper and salt, and a bit of butter; pour it into the dish with the hare, and serve.

HARE SAUCE.—1. Stew the liver of the hare in some good beef gravy; when quite tender, chop it fine, with a shallot, and a bunch of pot-herbs; add a teaspoonful of

chili-vinegar, half a gill of port wine, and two tablespoonfuls of red-currant jelly. 2. Steep the crumb of a penny roll in port wine; put it on the fire with a piece of butter; beat it smoothly, add pepper, salt, and currant jelly, with a tablespoonful of vinegar; let it boil, and serve it up hot. 3. Simmer together half a pint of red wine and a quarter of a pound of sugar, in a covered saucepan for twenty minutes; serve hot.

HARE SOUP.—This soup may be made either clear or thick as desired. For *clear hare soup*. Cut a large hare into pieces, and put it into a saucepan with a knuckle of veal, and a cowheel; add five or six quarts of water, herbs, onions, &c., and a little mace; stew it over a slow fire for two hours, or until the gravy is good; then take out the back and legs, cut the meat off, returning the bones, and stewing the whole until the meat is nearly dissolved. Then strain off the gravy, put a glass of wine to every quart of the soup, and send it to table with the meat cut into small pieces.

For *thick hare soup*. Cut the hare into pieces and lay them at the bottom of a large jar with a slice or two of lean ham, an onion, a head of celery, and a bunch of sweet herbs, with about three quarts of boiling water. Put the jar into an oven, and let it remain until the hare is stewed to shreds. Strain off the liquor, take the meat from the bones and pound it in a mortar, mixing it with the soup until it is quite thick. Let it boil up once, with a tablespoonful of ketchup, a glass of port wine and a little cayenne pepper. Send it to table with forcemeat balls in the tureen, made with the chopped liver, and fried. The same kind of soup may be made in a more economical way, by cutting off the head and shoulders of the hare, and roasting only the hind quarters; then, on the following day, stew down the bones along with the head and shoulders, and make the whole into a soup, as previously directed. A pound or two of shin of beef will increase the quantity, and a few minced roots, with a mushroom, will improve the flavour.

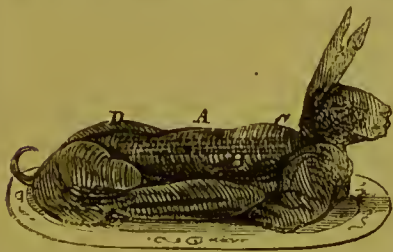
HARE STEWED.—Divide the hare just below the ribs; cut the fore part into pieces, and put them into a stewpan with a little mace, an onion stuck with cloves, a few peppercorns, an anchovy, and a bunch of sweet herbs; add sufficient water to cover them, and let them stew gently. In the meantime, put some stuffing into the hind part; tie it up, lard it, and roast it; flour it well, and baste with butter. When the stew is tender, take out the meat, strain the liquor, add to it a glass of red wine, a tablespoonful of ketchup, and a piece of butter rolled in flour; stir it over the fire till somewhat thick; then take up the roasted portion of the hare, lay it in a dish, place the stewed pieces around, and pour the sauce over. Serve with some good gravy, separately, in a sauce tureen.

HARE STOCK.—Cut up the fillet from a sirloin of beef; steep it in port wine and vinegar; cut it open and stuff it with hare stuffing; make it up as nearly as possible

into the shape of a hare; roast it before a brisk but not a fierce fire; baste with port wine and vinegar, in which a clove of garlic has been bruised, and afterwards with butter and a little mace. Take up the gravy that is in the dripping-pan, work it well with melted butter, and put it into the dish. Serve it with hare sauce.

HARE STUFFING.—1. Parboil the liver of a hare, and mince it; add an equal quantity of grated bread crumbs, double the quantity of fat bacon chopped, and a piece of butter the size of a walnut. Season with pepper, salt, nutmeg, chopped lemon, thyme, and parsley; bind with an egg well beaten. 2. Boil the liver and finely mince it with two ounces of beef suet; chop also a little parsley, some sweet herbs, with a little grated lemon-peel; season with pepper and salt, and mix the whole together with an egg. 3. The crumb of a penny loaf grated, three ounces of uarrow, a small quantity of minced parsley, a shalot, and a boned anchovy; a teaspoonful of lemon-peel, and the same quantity of nutmeg; add salt, pepper, and cayenne to taste; parboil the liver and mince it finely. Mix the ingredients with the yolk of an egg, and the crumbs soaked in a very little red wine. 4. Chop, and afterwards pound in a mortar, half a pound of beef suet, an equal bulk of soaked bread crumbs, lemon-peel, parsley, and a sprig of thyme chopped: season with pepper and salt, add two eggs well beaten, and a little milk or broth.

HARE, TO CARVE.—First take off the legs, then cut the back in two at D, A, and C. Some prefer to cut it along the chine bone,



as dotted in the engraving. Next take off the shoulders, and split the head in two; to hold it firmly, stick the fork into one of the eyes, which will render the operation more easy of accomplishment. Serve with ample gravy on each plate.

HARE, TO CHOOSE.—A hare is stiff when freshly killed, and, if young, the ears tear easily, and the claws are smooth and sharp; a narrow cleft is also to be observed in the lip. It should be kept for five or six days before it is dressed; and in cold weather it will remain good for ten or fourteen days.

HARE, TO PREPARE FOR ROASTING.—As soon as the hare is received, take out the liver, &c., wipe the inside of the hare thoroughly, season it with a little pepper, and hang it up. When required for dressing, cut off the fore-legs at the first joint, raise the skin of the back, and draw it over the hind legs; leave the tail whole, then draw

the skin over the back, and slip out the fore-legs; cut it from the neck and head; skin the ears, and leave them out. Clean the vent. Cut the sinews under the hind-legs; bring them forward, run a skewer through one hind leg, the body, and another hind leg; do the same with the fore legs; lay the head rather back; put a skewer in at the mouth, through the back of the head, and between the shoulders; put in the stuffing, and tie the hare round with a string, passing the string over the legs to keep them in their places.

HARE-LIP.—This disease, so called from a fancied resemblance to the appearance of that animal, is one of those distressing malformations that are born with a child. Hare-lip is more frequently found in the upper than in the under lip, and fortunately it is so, for, in the latter case, the child is unable to articulate, or retain the saliva in the mouth, creating a source of ceaseless discomfort and pain. The disease consists of a fissure or longitudinal division of one or both lips, having a space between, wider at the bottom and narrowing to an apex at the gum, resembling the outline of the letter V reversed, A. This condition is called the simple hare-lip, but sometimes the fissure is double, having a pendant piece of the lip in the centre of both fissures. The compound hare-lip is that condition of deformity where the cleft extends along the bones of the palate, over the whole arch of the mouth, while in some cases the bones of the palate are entirely wanting—a most distressing malady, as the child can never articulate, and only with great difficulty eat or drink, as all sustenance passes into the nostrils. Independent of the deformity attending this malformation, the infant so afflicted is prevented from sucking, and must be reared by hand.

The treatment of this misfortune is very simple and most satisfactory, and no mother out of apprehension of her child's suffering should neglect to have the deformity cured; which, when in the simple form of the cleft lip, can be effectually done. The operation consists in making the two edges of the fissure even, bringing them together by means of two short silver needles, and keeping them in that position by silk thread passed over their ends like the figure 8, till the process of union has taken place, requiring about eight or ten days, when the needles are withdrawn, and in a week longer the permanent cure will be effected. The best period for performing the operation is between the age of six and twelve months, before the child can entertain any alarm at what is to be done, or by cries and restlessness materially interfere with the success of the operation.

HARICOT.—See BEEF, MUTTON, VEAL, &c.

HARICOT BEAN.—This species of pulse is extensively used in French cookery; it is, however, but little used in England, although its nutritious qualities, have been proved by experiments to be greater than those of any other garden vegetable, and nearly equal to bread. They also possess

the advantage of being very cheap, and easy to procure, and they may be obtained for about fourpence a quart of cornhandlers or seedsmen. They will grow freely in many soils, but are very liable to the slug; it is therefore advisable, when they spring from the ground, to protect them on each side by a layer of soot and lime. When fully ripe, the beans should be taken out of the pods, put into bags, and kept in a dry situation.

HARICOT BEANS, to DRESS.—There are several modes of dressing haricot beans; the following are the most approved: 1. Put a quart of beans into half a gallon of cold soft water, with an ounce of butter; simmer them slowly for about three hours, drain them, and put them into a stewpan, with a little salt, pepper, chopped parsley, two ounces of butter, and the juice of a lemon; place them on the fire for a few minutes, stir well, and serve. 2. Boil some water in a saucepan, with some salt and a little butter; then put in the haricots, and when they are quite tender, strain off the water; then add a good-sized piece of butter, and let them simmer for a short time, taking care that they do not become brown; then add a cupful of good gravy; season with pepper and salt, and just previously to serving, thicken with white of egg. 3. Boil a quart of haricot beans in water as directed in the preceding receipt, but with the addition of salt, pepper, sweet herbs, two cloves, and a bay leaf; when the beans are boiled, drain them in a cullender; then boil for a short time, a pint of rich milk, and a few tablespoonfuls of cream, with a little salt and pepper; put in the haricots, let them boil for a few minutes, then serve.

HARNESS.—See BIT, BRIDLE, REINS, SADDLE, &c.

HARRIER.—A species of dog occupying an intermediate station between the beagle and the foxhound. The character and speed of the hound depend greatly upon the nature of the country hunted over. The smaller harrier will best suit a deeply enclosed country; but where there is little cover, and less doubling, greater size and



fleetness are requisite. The characteristics of a good harrier are, a clean and closely trimmed neck, the head fine, but not too sharp; the ear-flaps thin; the nostrils open;

and the deep chest embraced by shoulders broad but light, and well thrown back. The fore-legs should be quite straight, clean, long, and terminated by a round ball-like foot. The hind limbs should be angular, and the thighs powerful.

HARROW.—An agricultural implement employed to pulverize the ground which has been moved by the plough, to disengage from it the weeds and roots which it may contain, or to cover the seeds of the cultivated plants when sown. According to the diversity of soils, and the particular use to which the harrow is to be applied, its form undergoes considerable modification. Strong heavy lands require heavier harrows than those of a light nature. When the land is very foul, and calculated to choke the teeth of the harrow, a powerful and effective instrument is generally used, known as *Finlayson's harrow*, as represented in the annexed engraving. This instrument possesses the



following advantages:—From the position in which the tines are fixed, their points hanging nearly on a parallel with the surface of the land, the instrument is drawn with the least possible waste of power. From the curved form of the tines, all stubble, couch, &c., is brought up to the surface, and rolled over them—the instrument thus relieving itself in its progress. The readiness with which the cultivator can be adjusted, so as to work to any depth, renders it of great value, inasmuch as the regulator or lever can be moved up and down with the greatest ease, each notch upwards giving the tines an additional depth of one and a half or two inches. The axle-tree of the wheels is also capable of being moved up and down by a screw, so that the whole implement can be easily adjusted to work at any depth, from four to ten inches. In turning at the headlands the lever is pressed down to the lowest notch, thereby elevating the front tines out of the soil, and allowing the instrument to be easily moved round. *Armstrong's harrow* differs from others in the form of its framing, which is of iron and of a zig-zag shape, so arranged that the tooth or tine shall be fixed at each angle, in such manner that the lines formed by them shall be equidistant over the breadth of the land they are intended to cover. They can be adapted either for heavy or light work. *Morton's revolving brake harrow* proves an effective implement on light sandy soils. The principle is somewhat similar to

that of the hay-making machine, except that, in place of the surface, it goes to the very bottom of the furrows, bringing up a far greater quantity of weeds than any fixed harrow could be expected to accomplish. *Biddell's extirpating harrow* is intended for breaking up land when it is too hard for the heaviest harrows, and for bringing winter fallows into a fine state of tillage. In working summer lands, by the shape of its teeth it is calculated to bring to the surface all grass and rubbish; it is also found generally useful for accomplishing fine tillage. *The Norwegian harrow* is to be met with in two or three varieties. It is most valuable immediately after ploughing; it breaks and pulverizes the land, leaving three or four inches' depth of fine mould, well prepared for seed; it saves the use of the heavy and middle-sized ordinary harrows, the small seed harrows, once after sowing, being sufficient.

HARROWING.—In performing this operation, it is not only necessary that the implements should be of different sizes, but that they should be worked in different ways, according to the strength and condition of the soil on which they are employed, and the nature of the work to be executed. When employed to reduce a strong obdurate soil, not more than two harrows of the old or common sort should be yoked together, because they are apt to ride and tumble upon each other, and thus impede the work, and execute it imperfectly. On rough soils, harrows should be driven as fast as the horses can walk, because their effect is in direct proportion to the degree of velocity with which they are driven. In ordinary cases, and in every case where harrowing is meant for covering the seeds, and the common implement is used, three harrows are the best yoke, because they fill up the ground more effectually, and leave fewer vacancies than when a smaller number is employed. The harrow-man's attention, at the seed process, should be constantly directed to prevent these implements from riding upon each other, and to keep them clear of every impediment, from stones, lumps of earth, clods, &c.; for any of these prevents the perfect working of the implement, and causes a mark or trail upon the surface, always displeasing to the eye, and generally detrimental to the vegetation of the seed. Harrowing is usually performed first in length, then across, and finally in length, as at first. In the first part of the process the harrows should be drawn in a straight line, without suffering the horses to go in a zig-zag manner; the horses should also enter fairly upon the ridge, without making a curve at the outset. In some instances an excess of harrowing has been found prejudicial to the crop; but it is always necessary to give so much as to break the furrow and level the surface, otherwise the operation is imperfectly performed. The proper juncture for harrowing is a consideration of the greatest importance. It should be executed when the soil is in a proper state, between wet and dry, and according to the nature of the land; for, if too wet, it will often do more harm than good; and if too dry, it will, on

tenacious land, have very little effect. In a climate like that of this country, where the opportunities for many of the processes of husbandry are so transient and precarious, it must indeed occur to every farmer that this is one that should never be neglected, and that, particularly at seed time, he should always possess the power of putting the crop into the ground within the shortest possible space of time. Sometimes the soil, soon after ploughing, or after rain, is found in such a state of adhesion as not to be broken readily; a day or two after, it may, perchance, be found in exact temper; if at that moment it is not harrowed, the right time is lost. A drying north-east wind may spring up, and in two days the temper of the soil is gone; each piece of earth that now moves is a clod, and the effect of the harrow upon them is nearly lost.

HARTSHORN.—A medicinal agent obtained from the antlers of the stag, or any kind of bone, by distillation. The salt of hartshorn has a pungent odour, a hot and saline taste, and powerful alkaline reaction; it is used as a stimulant and antacid. Spirit of hartshorn is the old name for water of ammonia. Hartshorn shavings are used for a variety of purposes in the arts and manufactures. A decoction is frequently employed for fining beer and other liquors, it being preferable to isinglass on account of its cheapness.

HARTSHORN JELLY.—Boil half a pound of hartshorn in three quarts of water, over a gentle fire, till it becomes a jelly; when a little hangs on a spoon it is done enough. Strain it into a well-tinned saucepan, and add to it half a pint of white wine, and a quarter of a pound of loaf sugar. Beat the whites of four eggs to a froth, stir it sufficiently for the whites to mix intimately with the jelly, and pour it in as it cooking it; boil it for two or three minutes, then put in the juice of four lemons, and let it boil for two minutes longer. When it is finely curdled and of a pure white, pour it backwards and forwards into a jelly-bag until it becomes quite clear; fill the jelly-glasses, put some thin lemon-rind into the basin, and when the jelly is all run out of the bag, fill the rest of the glasses, and they will appear of a bright amber colour. Add sugar and lemon-juice agreeably to the palate. This jelly is lighter of digestion than isinglass, and very nutritive. It may be employed for all the purposes of diet in the same way as isinglass.

HARVESTING.—The operation of gathering, cutting, or rooting up field crops, and drying, or otherwise preparing them for winter use. The first harvest which occurs in Britain and similar places is that of the forage grasses or other plants made into hay; the next is the harvest of corn crops; and the third the harvest of root crops, such as potatoes, turnips, carrots, mangold-wurzels, &c. The commencement of harvest is necessarily regulated by the state of the weather, and varies in different seasons. It is, therefore, an object of importance to the farmer to ascertain the exact time when it may be begun, for he must

employ extra hands to perform the work; and as it only lasts during a comparatively short period, the labourers receive high wages, and are maintained at heavy cost. It is also attended with the most anxious solicitude, for it is a business which cannot for a moment be neglected; and personal superintendence, from the dawn of the day to its close, is necessary for its proper management. To facilitate the particular operations of farming, all other work should be previously disposed of, and every preparation made for the performance of this; the barns should be thoroughly swept out, the stack frames repaired, and every tool in complete condition. The straw bands should be in readiness for tying the sheaves, as well as the ropes for securing the stacks; and arrangements should be made in the house for the regular supply of whatever is to be furnished to the labourers, so that every unnecessary delay may be avoided.—See **BARLEY, CORN, HAYMAKING, OATS, REAPING, &c.**

HASH.—See **BEEF, FOWL, LAMB, MUTTON, &c.**

HASTY PUDDING.—Boil, in a quart of good milk, about a quarter of a pound of flour, until it becomes somewhat thick, put it into a basin with some butter and a little ground nutmeg, and sweeten to taste; when quite cold, mix in six eggs, well beaten; line a dish with thin puff paste, covering the bottom of it with any kind of preserve; pour the pudding over it, and bake in a slow oven for three-quarters of an hour.

HAT.—A hat should be chosen possessing a short, smooth, fine nap, of a good black colour, and sufficiently elastic to resist ordinary wear and tear, without breaking or giving way. The shape of the hat should correspond with the contour of the face; persons with large features should never wear a broad-brimmed hat; while those whose faces are thin should wear a hat with a narrow brim. Although much greater latitude is now allowed in the fashion of hats than formerly, still all eccentricity should be avoided, and a person should not be hasty in adopting a new style because it happens to be in vogue, without first ascertaining whether that style is suitable for him. During the summer months, white hats will be found more pleasant and cool to wear than black ones. A shabby hat should never be worn, as it is the most conspicuous part of the attire, and not only looks bad in itself, but imparts a mean appearance to the whole person. The care and preservation of a hat will be found to depend in a great measure upon the following precautions:—If your hat be wet, shake it out as much as possible, then brush with a soft brush quite smooth, or with a linen cloth or handkerchief; wipe it very carefully, keep the surface flat and smooth in its ordinary direction; then with a small cane beat the nap gently up, and hang the hat up to dry in a cool place. When it is dry, place it on a table, and brush it round several times with a soft brush in the proper direction. If the gloss be somewhat dulled, pass a flat iron moderately heated over it

two or three times, and brush it afterwards. Hats should be brushed daily with a soft brush, and when not in use should be put by in a box. New hats generally press unpleasantly on the head for the first few days that they are worn, and sometimes they can never be made to adapt themselves to the head. This defect is occasioned by hats being fitted to the head by the means of general capacity only, without any regard being paid to the peculiarities of conformation. As a remedy for this evil, an instrument, called the *configurotype*, has been



recently introduced, by the aid of which, in a few seconds and without inconvenience, an exact model of the head is obtained, as seen in the engraving. By this means a perfect fit is ensured, free from pressure on any part of the head, and unattended by headache, excessive perspiration, and other annoyances, which are inseparable from an imperfectly fitting hat. For persons who ride much on horseback, or who are engaged in out-of-door pursuits, and who in tempestuous weather are compelled to thrust the hat forcibly over the temples, so that it may not blow off, a hat made upon these principles will be found to be unusually comfortable and pleasant.

HATCHING.—When eggs are to be hatched, they should be as fresh as possible; if laid the very same day, so much the better. This is not always practicable, when a particular stock is required to be increased; but if a numerous and healthy brood is all that is wanted, the most recent should be selected. In the meanwhile, the air should be excluded from the eggs as much as possible; it is best to set them on end, and not to suffer them to lie and roll on one side. Dry sand or hard wood sawdust (not deal, on account of the turpentine) is the best packing. But when choice eggs are expected, it is more prudent to have a hen waiting for them, than to let them wait for her. Eggs sent any distance to be hatched, should be tightly enclosed in a wooden box, and packed so as neither to touch each other nor the sides of the box. Oats form an excellent vehicle for this purpose, filling all interstices, and moreover

being nseful at the journey's end. When eggs are left to be brought forth by the hen, a certain number is placed under her in the nest, when she is in full inclination to sit. From nine to twelve eggs are placed, according to the extent of the breast and wings. Three weeks is the period of hatching with the common hen. Sometimes when she does not sit close for the first day or two, or in early spring, it will be some hours longer; more rarely in this climate, when the hen is assiduous and the weather is hot, the time will be a trifle shorter. Sometimes a hen will desert her eggs, a circumstance which may occasionally be traced to an uncomfortable condition of the skin, caused by vermin or want of cleanliness, and this affords a strong reason for keeping the hen-house clean, and giving the animals the opportunity of purifying their feathers. Occasionally the hen is vicious, or in short, a bad sitter; and experience in selecting the best hatching hen is the only remedy. Sometimes a hen will break the eggs with her feet; and in such cases the broken eggs must be removed as soon as observed, otherwise she may eat them, and from that be tempted to break and eat the sound ones, and thus spoil the whole. It has generally been found that hens which are the best layers are the worst sitters. Those best adapted, have short legs, a broad body well furnished with feathers, their nails and spurs not too long or sharp. The desire to sit is made known by a particular sort of clacking; and a feverish state ensues, in which the natural heat of the hen's body is very much increased. The inclination soon becomes a strong ungovernable passion. The hen flutters about, hangs her wings, bristles up her feathers, searches everywhere for eggs to sit upon; and if she find any, whether laid by herself or others, she immediately seats herself upon them, and continues the incubation. With a proper provision of food at hand, warmth, quiet, and dryness, a good hatching hen will give little trouble, and in due time the brood will come forth; one or two eggs may perhaps remain unhatched or addled, but their loss is of little consequence. As soon as the hen hears the chirp of her young, she has a tendency to walk off with them, leaving the unhatched eggs to their fate; it is, therefore, advisable to watch the birth of the chicks, and to remove each as soon as it becomes dry, which may be in a few hours afterwards. By this means the hen will sit to hatch the whole; yet she should not be wearied by too long sitting. If all the eggs are not hatched at the end of twelve or fifteen hours after the first chick makes its appearance, in all probability they are addled, and may be abandoned. Sometimes the chicks will experience a little difficulty in emerging from the shell, and will require some assistance. The difficulty is to know when to render this aid. The chicks often succeed in making the first breach, but appear unable to fracture the shell any further. A rash attempt to help them by breaking the shell, particularly in a downward direction to-

wards the smaller end, is often followed by a loss of blood, which can ill be spared. It is better to wait awhile, and not to interfere with any of them till it is apparent that a part of the brood have been hatched some time, say twelve hours, and that the rest cannot succeed in making their appearance. After such wise delay, it will generally be found that the whole fluid contents of the egg, yolk and all, are taken up into the body of the chick, and that weakness alone has prevented it forcing itself out. The causes of such weakness are various; sometimes insufficient warmth, from the hen having sat on too many eggs; sometimes the original feebleness of the vital spark included in the egg; but most frequently staleness of the eggs employed for incubation. The chances of rearing such chicks are small; but if they get over the first twenty-four hours they may be considered safe.

ARTIFICIAL HATCHING is a mode by which incubation is effected by the application of heat, and without the intervention of the hen. An establishment for this purpose was set on foot in London some years since, with generally successful results, and in which the following process was adopted: An oven consisting of eight floors or compartments, was employed to contain the eggs, while they were subjected to heat from steam pipes. Each compartment held upwards of two hundred eggs, and the whole exhibited the hatching process in all its various stages. The regularity with which the temperature was maintained, as well as accommodated to each peculiar stage of the process, brought out the chick with much greater certainty than when the incubation was performed by the hen. When the chicks emerge from the shell they are immediately removed from the oven, but are allowed to remain for a few hours until they become dry; these are then removed and put into a glass case at the end of the room. They are here for the first time fed, though not for twenty-four hours after being hatched; the material scattered among them consists of small bruised grits, or particles little larger than meal; these they eagerly pick up without any teaching, their instinctive desire for food being a sufficient monitor. After the brood has been kept in the glass case, which is partially open, for two or three days, and been thus gradually accustomed to the atmosphere, they are removed to one of the divisions of a railled enclosure on the floor. At six in the evening they are put to rest for the night in coops, twelve together in a coop: these coops are small wooden boxes lined with flannel, and furnished with a flannel curtain in front, to seclude and keep warm the inmates as comfortably and securely as if under the wing of the mother. At six or seven in the morning, they are again allowed to come forth into their court-yard, which being strewn with sand, and provided with food and water, affords them all the advantages of a run in an open ground.—See CHICKENS, DUCKS, GEES, GUINEA FOWL, POULTRY &c.

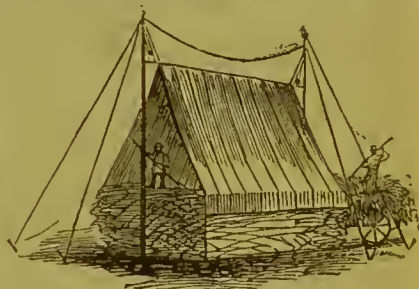
HAWKER.—An itinerant trader who proclaims his wares through the street, or from town to town. In order to protect settled traders and shopkeepers, the avocations of hawkers are placed under strict penal regulation. Every hawker has to pay an annual licence duty of £4; and if he travel with a horse, ass, or other beast bearing or drawing burden, he is subjected to an additional duty of £4 for each beast so employed. Unless householders or residents in the place, they are not allowed to sell by auction, under a penalty of £50. But nothing in the Act extends to hinder any person from selling or exposing for sale any sort of goods in any public market or fair. Every hawker, before he is licensed, must produce a certificate of good character and reputation, signed by a clergyman and two reputable inhabitants of the place where he usually resides. He must have inscribed, in Roman capitals, on the most conspicuous part of every pack, box, trunk, case, cart, or other vehicle in which he shall carry his wares, and on every room and shop in which he shall trade, and likewise on every hand-bill which he shall distribute, the words "Licensed Hawker." Penalty in default, £10. Unlicensed persons wrongfully using this designation, £10. Hawkers dealing in smuggled goods, or in goods fraudulently or dishonestly procured, are punishable by forfeiture of licence, and incapacitated from obtaining one in future. Hawkers trading without licence are liable to a penalty of £10. So, also, if they refuse to show their licence on the demand of any person to whom they offer their goods for sale, or on the demand of any justice, mayor, or constable, or other peace officer, or any officer of the Customs or excise. To forge or counterfeit a hawker's licence incurs a penalty of £300. To lend or hire a hawker's licence subjects the lender and borrower to a penalty of £40 each, and the licence becomes forfeited. But the servant of a licensed hawker may travel with the licence of his master, provided he usually reside in the house of his employer as a member of his family. Hawkers trading without a licence are liable to be seized and detained by any person, who may give notice to a constable, in order to their being carried before a justice of the peace. Nothing in the Act extends to prohibit persons from selling fish, fruit, or victuals; nor to hinder the hawker of any home manufacture from exposing his goods for sale in any market or fair, and in every city, borough, town corporate, and market town. A single act of selling, as a parcel of handkerchiefs to a particular person, is not sufficient to constitute a hawker within the meaning of the statute. No person being a trader in any goods, wares, or manufactures of Great Britain, and selling the same by *wholesale*, shall be deemed a hawker; and all such persons or their agents, selling by wholesale only, may go from house to house to any of their customers, who sell again by wholesale or retail, without being subject to any of the penalties contained in any act touching hawkers, pedlars, and petty chapmen.

HAWTHORN.—A common small tree, or shrub, which grows almost everywhere in thickets, copses, hedges, and high open fields. The common hawthorn blows in May, and can be propagated from seed, which must be kept in sand through the winter, and sown in spring. The young plants will be fit to place out in two years. There are several varieties of this species, among others the Glastonbury thorn, which blossoms sometimes as early as Christmas. The double-blossomed hawthorn is one of the greatest ornaments of our pleasure-grounds, whether it be kept as a shrub, or trained as a tree. The yellow-berried hawthorn is peculiarly available for shrubberies, for its buds are of a fine yellow in the spring, and its fruit, which is of the colour of pure gold, hang on the branches nearly the whole of the winter, giving great variety to the plantation. Evergreens should never be planted without a few of these shrubs being intermixed, to enliven them in the winter months. The hawthorn is excellently well adapted for small lawns or paddocks, where larger trees cannot be admitted. In husbandry, these shrubs are called quicksets; and when kept well cut, they form hedges scarcely less impregnable than those composed of holly.

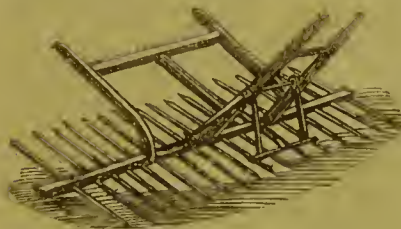
HAY.—Any kind of grass cut and dried as fodder for cattle. When horses are fed on hay, it is a matter of dispute whether the light and apparently acrid grasses of uplands, or that of mere fertile natural meadow ground, or the rich produce of the artificial grasses, is to be preferred. This must, however, depend on the quantity of corn with which the horses are supplied. When that is abundantly furnished, there can be no doubt that the former will be found better for their general health, and especially for their wind; but as farm horses are usually limited in their consumption of grain, and the slowness of their movements renders the clearness of their wind a matter of comparatively little moment, the other kinds of hay will be found the best adapted to support their strength. In gentlemen's stables, no other than meadow hay is generally admitted; and it is in all respects the best. Sainfoin is commonly esteemed the first, and clover the next, in quality; but tare hay, if well made, is very hearty food. Old hay, from having undergone that slow process of fermentation by which the sugar that it contains is developed, is far more nutritive and wholesome than new hay. Good old hay is long and large, hard and tough; colour inclining to green rather than to white; it has a sweet taste, and fragrant smell. In damp weather it absorbs moisture and becomes heavier. Bad hay will change a horse's appearance in two days, even with an unlimited quantity of corn. It is an excellent plan, especially when hay has been exposed to continued wet weather, to add to it a portion of common salt. This admixture not only induces live stock to consume the hay with avidity, but it prevents mouldiness and mowburning; it is usual to put about half a bushel of salt to every load of hay; it may be spread by hand, or through a sieve.

HAYMAKING.—The period of mowing and the mode of making hay of the different grasses—both natural and artificial—vary not only according to the state of the weather and the practice of separate districts, but also according to the uses to which the hay is intended to be applied. The proper time for cutting the meadow grasses is when the saccharine juices are in the greatest abundance, which appears to be when the seed is formed, but before it has arrived at maturity, for, if allowed to grow thoroughly ripe, not only will a nutritive portion of the plant be wasted, but the land will become more exhausted than if the crop had been cut earlier. In the *making* of hay the greatest amount of care and vigilance are required, for the weather can never be depended upon, whilst the process is often necessarily left to people who understand nothing about it, and who, if not closely watched, will spoil the hay or idle away their time. *Mowing* commences at the earliest dawn of day, while the dew is upon the ground; and when the grass is down, if the weather be favourable, the swaths should be opened with forks, and evenly spread over the meadow during the same morning, if it be cut early. If the weather continue hot, the swaths should be immediately shaken out and tedded, or thrown about once or twice in the course of the same day, by which means the hay will be cured in the least time possible, and its colour and essential juices more effectually retained than if it be exposed in the same position to the sun. It should then be gathered with rakes, to effect which the common hand-rake is sometimes used, and at other times a horse-rake is employed similar to that represented in the engraving. On the fol-

the hay to the stack is for a ploughman, with cart and single horse, to load his cart with the hay on the field, forked to him by the person who builds the stack, and for the ploughman, in his turn, to fork the hay from the cart to the builder of the stack. A field-worker rakes the bottom of the small ricks forked in the field, and then carries the hay on the stack to the builder from the forker. In this way three persons, working the whole day, day after day, will carry a large quantity of hay in the course of a week, and the quantities passing from hand to hand being small at a time, dry effectually during the operation, while the stack augments slowly. Great caution is requisite in the *stacking* of hay; for, if not put together perfectly dry, it is liable to ferment, and from this being exposed, to catch fire. Hay-stacks are generally built of an oblong form, as the hay can



thus be more accurately cut into square trusses than when the stack is round. The ground upon which the stack is built should be either raised with stones and hard compost, or with chalk, to secure the bottom from wet; or a sill of stout timber, with the bark on, should be laid down of the exact size of the stack, and afterwards he filled up with faggots or with furze, covered with hurdles, for a floor. The ricks should stand parallel to each other, at least ten or twelve feet asunder, that carts may have room to pass between them, as well as to afford a free circulation of air in all directions. While forming, the stack should always be covered with rick-cloths supported by poles and ropes, in the manner illustrated. Immediately after the stack of hay has been built, a heat will arise in it corresponding with the degree of fermentation the hay is undergoing. While this is proceeding, the stack subsides in bulk, and after the fermentation and subsidence have ceased, the stack should be thatched. But should fermentation continue so long as to affect the quality of the hay, means should be used to put a stop to it, by shoring up the stack on both sides with stout posts, to admit of the free access of cool air. As a preparatory operation to the thatching, after the removal of the rick-cloth, the sides and ends of the stacks are neatly trimmed from angle to angle, with a small increase of breadth to the eaves. This operation simply consists of pulling out the straggling ends of hay, which give a rough appearance to the exterior, in order to render it smooth; and its



lowing day, it must again be thrown out to the air, and if then judged sufficiently dry, it should be brought together later in the evening in large heaps, after which it may be carried on the third day, without any further process, to the stack. The chief points to be observed are, always to preserve the hay as much as possible from dew and rain; therefore, to bring it into windrows, if not to cock it at nightfall; never to open it in the morning till the dew has evaporated; and not to allow it to remain too long under the scorching heat of the sun without being turned. The degree to which hay requires to be dried depends on its quality; coarse hay should be allowed to heat more in the stack, and, therefore, should be less made than that of fine succulent herbage. An economical mode of *carrying*

use is twofold—to preserve the hay pulled out, which would otherwise be rendered useless by exposure to rain, and to prevent damp hanging about the stack. The heading or thatching is performed with straw and straw-ropes; and these should be prepared beforehand, so as to be ready by the time they are wanted. The thatching should be carried on both sides of the stack simultaneously by two, and begun at the same end. *Hay barns* possess the decided advantage of not only forming a secure receptacle for hay, but also affording considerable convenience during changeable weather in carrying small quantities at a time as soon as ready, as well as in unloading the waggons under cover, when it could not be done with safety in an exposed yard. In winter, hay barns also admit of the hay being cut out of the stack, weighed and bound in perfect safety, which could not sometimes be done out of doors, either with regard to the security of the crop, or the comfort of the people preparing it for market. Under these circumstances, also, the hay may be put together earlier, even by a day, than it would be safe to do in a stack. A hay barn of the most secure and convenient kind is usually constructed as follows:—The roof is tiled, and the structure is boarded to some distance below the eaves: the entrance being in the centre, it forms two large bays for the reception of the crop, and affords complete shelter to a couple of waggons. *Hay is sold* in London, and generally throughout the southern markets, by the load, containing thirty-six trusses, each weighing sixty pounds, until Michaelmas, and fifty-six pounds after that period, or eighteen hundredweight to the load. In many country places it is, however, estimated by the ton: at Edinburgh it is disposed of by the stone of twenty-four pounds avoirdupois, delivered in bulk.

HEADACHE.—These painful affections are either the consequence of an overloaded state of the stomach, indigestion, some chronic affection of that organ (when it can only be relieved by a treatment directed to remove the primary cause), or it proceeds from some crude and indigestible aliment in the stomach and bowels; besides these causes, headache is an attendant symptom of all fevers, and not unfrequently results from extreme lassitude and debility, when it is called a *nervous headache*.

Treatment.—For all cases the consequence of indigestible food or acrid substances in the digestive organs, the best and most permanent remedy is a colocynth, or a blue and colocynth pill, in the proportion of equal parts, three or five grains of either made into one or two pills. When a torpid liver is the cause, a three grain blue pill should be taken at bed-time for three or four nights; and a black draught or a seidlitz powder on the morning after the last pill. For the headache proceeding from a weak stomach, flatulence, and dyspepsia, a teaspoonful of Gregory's powder, in a small quantity of peppermint water, twice a day, will be found eminently serviceable. For nervous headache, either half a drachm of citric acid

dissolved in a little water, and taken after each meal, for a few times, or thirty drops of sal volatile, in a wineglass of water, will be found efficacious. If the pain, however, is settled, and confined to one part, either a blister should be applied behind the ears, or one or two leeches placed on either temple.

HEALTH, PRESERVATION OF.—The preservation of health depends in a great measure upon ourselves, that is to say, in observing certain rules and adopting definite principles in every condition of life, which reason and experience alike teach as being salutary and beneficial. It becomes, therefore, important to ascertain what are the conditions essential to health; a general acquaintance with these conditions may be easily attained by all, and the putting them into practice is much more within the power of individuals than is commonly supposed. The leading conditions essential to health are:—1. A constant supply of pure air. 2. A sufficiency of nourishing food, rightly taken. 3. Ample and appropriate clothing for the various seasons. 4. A sufficiency of exercise to the various organs of the system. 5. A proper temperature. 6. Constant employment of the mind. 7. Occasional relaxation from labour, and a sufficiency of cheerful and innocent enjoyments. In keeping with these principles for the preservation of health, the following particular rules are worthy of being borne in mind and followed out. Rise early and retire to rest early. Wash the whole body every morning with cold water, and rub it well with a rough towel. Drink water generally, and avoid excess of spirits, wine, and fermented liquors. Sleep in a room which has free access to the open air, and is well ventilated. When symptoms of uneasiness, fulness, or indigestion are felt, practise abstinence before having recourse to medicine. Never eat a hearty supper, especially of animal food or hot viands; and do not retire to rest until two hours at least after the meal has been taken. Take exercise daily, when able to do so, no matter what the state of the weather may be. Keep all impurities away from your abode, and insist upon the utmost cleanliness being observed in every department of the household. Avoid sudden alternations of temperature or any unnecessary exposure to evil influences, such as standing in a draught, sleeping immediately beneath an open window, and other obvious imprudences. Endeavour to preserve an equable frame of mind, a good temper, and a cheerful disposition, and do not suffer business anxieties or other cares to engross the mind too much. Observe this rule when sitting down to a meal or retiring to rest; for, if passion or ill-temper distract the system on these occasions, in the one instance the food introduced into the body will do more harm than good, and in the other, sleep will forsake the pillow, or if it come, it will be of that feverish and restless nature, which leaves the frame exhausted and unrefreshed, when it should resume its functions with renewed vigour. Employ the mind in useful and elevating pursuits, and the hands in such

occupations as are congenial. Above all remember the word "moderation;" and whether in eating, drinking, or exercise—in business, pleasure, or in any act or pursuit—obey that impulse which whispers "enough," and cries "forbear."—See ABLUTION, AIR, CLEANLINESS, EXERCISE, EXPOSURE.

HEART, DISEASES OF.—There are many affections of this vital organ that, professionally speaking, do not merit the name of disease, being in fact but temporary inconveniences, symptomatic derangements, or, as has been said, affections; but which, nevertheless, for the sake of perspicuity, it will be better to class generally under the one name of diseases of the heart, separating them, however, from the graver maladies by a distinct heading, and, as they form the lighter part of the subject, treating of them before considering the more serious form of this class of ailments. The heart, as the centre and source of the circulating system, is liable to a considerable number of affectional, both simple and complex, which may be divided into two heads—the functional or nervous, and the structural or organic.

Functional, or nervous affections of the heart.—Under this head are comprehended palpitation, syncope or fainting, angina pectoris, and neuralgia of the heart; all of which, though occasionally very distressing, and sometimes most alarming to the sufferer, are often only symptoms of other affections, and consequently of minor importance; and even when spontaneous, and producing considerable bodily disturbance, seldom causing any real apprehension, and still more rarely resulting in positive danger, and in this respect bear a marked contrast to those diseases of the opposite class.

Palpitation.—By this term is understood those frequent, strong, and irregular movements of the heart, occurring in individuals who have no indications of organic disease; these movements may be transient or continuous, frequently accompanied with an audible sound, so loud, as to be heard at several yards from the patient. Palpitation is often attended with a feeling of sinking and anxiety, accompanied with fainting fits or syncope, and sometimes with a pulsation at the pit of the stomach. The causes of palpitation, irrespective of a naturally nervous temperament, hysteria and weakness, are any strong emotions of the mind, long study, violent exercise, or a continued passive repose, the debility consequent on fever, or whatever weakens the standard of health. Besides these causes, palpitation may also be a symptom of organic disease of the heart. The persons most frequently affected with palpitation are females; the slightest extra exertion, or exposure to damp foggy weather, often suddenly producing a paroxysm, attended with pain in the head, and a sense of numbness in the left side or arm. Persons who suffer from spinal irritation are also liable to palpitation, attended in such cases with a remarkable acceleration of the pulse, often amounting to 160 beats in a minute. The respiration is generally difficult, or easily

rendered so, on the slightest exertion or mental emotion, and frequently induced by the slightest pressure, such as that of the stays on the chest, waist, or lower part of the spine, the pain often being intolerable. Palpitation is very common in young females between the ages of 15 and 25, especially where the occupation is long and sedentary, as in factories, or in dressmakers' establishments. Indeed, palpitation, with very rare exceptions, may be said to be a complaint peculiar to the female sex, and the more the occupation of young women confines them to a close unvarying atmosphere, the more prone are they to attacks of this troublesome disorder; and the more exposed they are to the open air, the less frequent and the less severe are all such maladies.

There are few affections, even of the gravest character, whose symptoms give rise to greater alarm in the mind of the patient, or doubt and uncertainty to the inexperienced practitioner, than those of a severe attack of palpitation: often before seeing his patient he hears the irregular throbbing of the heart; on looking on the white or lividly anxious countenance of the sufferer, fancies he reads the external characters of the most formidable organic mischief, while, in truth, a cheerful aspect, a few confident words, and the simplest remedies will not only remove all the unpleasant symptoms, but restore the apparently diseased patient to health and ultimately to strength. It is only when the pulse is intermittent that any organic disease is to be apprehended, the velocity or strength of the pulse depending entirely on some accidental cause, more or less easily removed. *Treatment.*—Though the causes that excite palpitation are numerous, they may all be reduced to two heads—that of inflammation or a state of plethora; and a state of local or constitutional debility. When palpitation can be traced to an inflammatory condition of body, it will be necessary, according to the age and the condition of the patient, to reduce the circulation by bleeding, either from the arm, or, what is more usual, by leeches, or cupping glasses over the region of the heart, or still better between the shoulders, low down on the spinal column, at the same time giving nauseating doses of tartar emetic, hydrocyanic acid or tincture of digitalis, or foxglove. The following mixture, containing all the advantages to be obtained from each may be safely substituted for one or either, having the power to allay inflammatory action, reduce the circulation, subdue pain, and promote a beneficial action on the skin:—

Take of

Campbor-water 6 ounces.

Powdered nitre 1 scruple.

Tartar emetic 3 grains.

Laudaum 1 drachm.

Dissolve and mix. Give two tablespoonfuls at once, and one spoonful every two or three hours afterwards. At the same time a low diet, rest, quietude, and strict attention to the state of the stomach and digestive organs are imperatively necessary.

Where, however, the exciting cause is debility, the system must be in the first case braced by cold bathing or the shower bath, followed by vigorous friction along the spine with the flesh-brush; tonics and steel in all shapes, as chalybeate waters, or steel wine or pills, or the usual iron and myrrh mixture: to this must be added change of air, a rich and liberal diet, and exercise either on horseback or by walking. The next affection of the heart is

Syncope, or fainting, which is characterised by an indescribable sense of distress and feeling of faintness; the eyes grow dim, and are covered with a kind of film, attended with noises in the ears, the face and lips are pale, a cold perspiration breaks out on the body, the mind succumbs and grows confused, the body totters, and, if not supported, falls; respiration becomes imperceptible, and the pulse is reduced to an irregular flutter. For a further account and treatment, see **FAINTING**.

Angina pectoris.—The first symptoms of this distressing complaint are a sudden and violent pain across the chest, coming on upon any slight exertion, such as going upstairs, or after a hearty meal. The pain gradually extends to the shoulder, and runs down to about the middle of the arm, accompanied with a sense of stricture or tightness across the chest, the pain becoming so acute as to threaten the patient with instant death. The pulse sinks and becomes weak and irregular, the countenance is colourless, cold sweats succeed, and a constant cough, and after a time an expectoration of a scanty viscid mucus. When the paroxysm first comes on, the patient is compelled to stand perfectly still, as the only relief he can obtain from the agony of his suffering is an absolute repose. After a time the fit comes on from the slightest cause or mental excitement, and often attacks him in the night upon waking from his first sleep. Angina pectoris is generally a disease of advanced life, and is often accompanied with flatulence, and common to gouty or rheumatic and sedentary habits of body; and though sometimes a symptom of functional derangement, is more frequently a characteristic of serious organic disease. *Treatment*.—The first indication is to relieve the urgency of the symptoms, and then between the pauses of the paroxysm administer remedies, to prevent the return of the disease. Bleeding is occasionally beneficial in this affection, but it must be employed in the earliest stage, and only a small quantity of blood taken from the patient, who is to be kept in a recumbent position, and as quiet as possible. Where there is much dyspepsia or gastric disturbance, an emetic is useful; but the main dependence for relief lies in the employment of antispasmodics and carminatives.

The following mixture, as containing the best of both classes, may be taken in the manner directed. Take of

Aromatic confection . . . 1 drachm.
Peppermint water . . . 6 ounces.

Rub smoothly down in a mortar, and add
Tincture of cardamoms,
compound 1 ounce.
Laudanum 1 drachm.
Compound spirits of
ether, or Hoffman's
anodyne 2 drachms.

Mix. If the pain is very severe, take three table-spoonfuls, two more in three hours, and one every four hours afterwards; or, when the symptoms are less urgent, two table-spoonfuls every four or six hours. Concurrent with the mixture, a blister or strong warming plaster should be laid over the left breast, according to the severity of the pain, and the spine between the shoulders rubbed with warm turpentine, or an embrocation composed of equal parts of camphorated oil, turpentine, and oil of amber. Having by these means, and strict repose, subdued the paroxysms, means must be adopted to prevent, if possible, a recurrence of the disease. This may be effected by removing all the exciting causes; by diminishing plethora, through aperients and low diet, by a diminution of animal and a preponderance of vegetable food; by avoiding all stimulants, spices, and heating substances, and by guarding against all violent emotions of the mind, or sudden and undue exertion or exercise. As all the symptoms of angina pectoris may be caused by dyspepsia, the state of the stomach should always command the first and most important consideration.

The next and last of the functional diseases of this organ is *neuralgia of the heart*, which differs chiefly from angina pectoris in being characterised by sharp darting pains in the left breast, but unattended by any obstruction in the respiration, and in most cases without any change in the heart's action or the pulse. It is purely a nervous complaint, and, like the previous affections, most frequently dependent on dyspepsia or flatulence, and a constipated state of the system. The treatment must be regulated by the causes that may seem to have induced the neuralgia; though, as a local application, to allay the pain of the paroxysms, a plaster of belladonna or opium and litharge will, in all cases, be found of very great advantage, and may, irrespective of any mode of internal treatment, be kept on the chest for some considerable time. There is also another form of heart affection sometimes met with, though not universally acknowledged by the profession, called *spasm of the heart*, in which the treatment must depend upon the age, sex, and strength of the patient; the chief remedies, however, being the hot bath, stimulants, such as ether and ammonia, and counter irritation by friction.

The other class of diseases to which the heart is liable are those which affect the tissue or substance of the organ itself, and are known as structural or organic diseases; all of them are, consequently, highly dangerous and often mortal maladies, and are called:—1. Inflammation, chronic and acute, of the bag of the heart—*Pericarditis*.
2. Of the substance of the heart—*Carditis*.
3. Hypertrophy, or enlargement of the heart,

either of the whole organ or a part, and frequently accompanied with ossification, softening, or dilatation, sometimes regarded as a distinct disease. 4. Atrophy, or wasting of the heart, a species of emaciation of the organ by which the heart of a full-grown man or woman becomes as reduced as that of a child—in other words, less than half its natural dimensions—and its texture growing so attenuated as to be as thin as tissue or bank paper. Nearly all these affections of the heart, however distressing their symptoms may be, almost always, when not the result of structural mischief, proceed from a faulty state of the digestive organs, and are frequently entirely cured by an assafetida pill taken two or three times a week at bed-time, and a little burnt soda and ruharh in the morning; and it is only when pain and great oppression occur that recourse need be had to ether, opium, or antispasmodics.

HEARTSEASE.—See PANST.

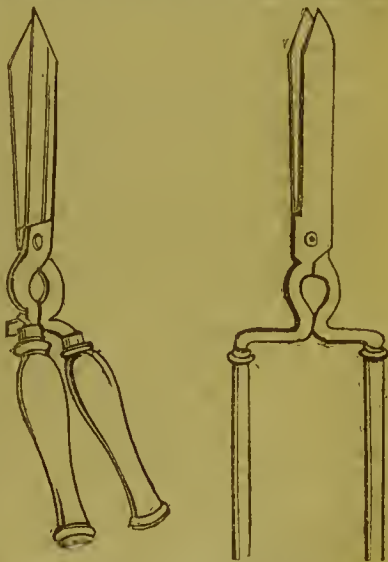
HEARTH, TO CLEAN.—Stone hearths should be first washed clean in soapsuds; then rubbed with a paste made of finely powdered sand; when this is dried on, the hearth should be brushed.

HEAT.—See *Dictionary of Useful Knowledge*.

HEATH.—Under this name are included an extensive assemblage of low shrubbery, evergreen plants, much valued for the beauty of their flowers, and the blossoming of many of them in the winter season. A number of the sorts ripen their seeds in this country, and may be so propagated; but the greater number are struck from cuttings, and some few by layers, which require two years to strike out roots. For *propagation by seed*, place potsherds at the bottom of the pots, cover them with siftings, then add sand, and mix the top layer with heath-mould. Make the surface smooth, and sow the seed in spring on the surface, covering it as lightly as possible; water gently with the finest syringe; place the pots near the glass, shade them from the bright sun, and keep the surface just moist. When the shoots begin to appear, give them air daily. As soon as they can be handled, transplant them into 5-inch pots, rather thickly, but standing clear of each other. In this state they may remain for six or eight months; and then be potted off into 3-inch pots, four in a pot; afterwards to be managed in the same way as cuttings. For *propagation by cuttings*, the month of July is the best time to commence the operation; but the cuttings must not be taken off till the young wood is firm. Take the cuttings off the plants about three-quarters of an inch long, pulling them downwards; strip off the leaves nearly half the length of the cuttings; place the cutting on the nail of the thumb, and, with a sharp knife, at right angles, cut off the small end close to the joint, or at the place where it was pulled from off the plant. Having done this, plant them in a pot filled with small pit or river sand, giving them a good watering to settle the sand about them. Set them on a shelf where they are a little shaded, cover them with glasses, and take care to keep the sand always moist. Some sorts

will be rooted in three months; others will require six. When the plants become large, several of them will continue in good health for three or four years without shifting, and will flower well. Cold pits or frames, in spring and autumn, are the best protection to place heaths in during their youth; and an airy, light, span-roofed greenhouse the most appropriate for them through winter and spring, when they are too large for the frames. No kind of plant is more injured by being kept in a chamber than heaths, nor will they thrive in a greenhouse, or in the open air, within the influence of the smoke of large towns. In the best situations, and under the most favourable circumstances, many of the species are short-lived, and, therefore, require to be frequently renewed by cuttings or seed.

HEDGE.—A living wall formed of woody plants, sown or planted in a line, and cut or clipped in such a manner as to form a compact mass of any degree of width or height that may be required, either for the purpose of shelter, separation, or defence. The hedges most generally used in agriculture are made of the whitethorn, because it has spring branches, and forms a strong defence against cattle. Hedges for the purposes of shelter and separation are chiefly used in gardening, and, for the most part, are formed of evergreen shrubs, such as the holly, yew, box, &c.; or if sub-evergreens, such as the privet; or if deciduous shrubs, or trees with persistent leaves, such as the hornbeam and



the beech. In the management of hedges of every description, an important point is to keep them dense, and impervious both to the wind and to animals, near the ground; for which purpose the section of the hedge requires to be made broader at the base than at the top, in order that the exterior leaves in every part of the hedge, may enjoy in an

equal degree the influence of light, air, and moisture. For keeping hedges in order, implements known as hedge-shears, as seen in the engraving, are required, especially for the privet and the yew; but when the twigs or shoots are longer, as in the hollow thorn or beech, the hedge-bill or pruning shears are preferable, as producing wounds more easily healed, and as not thickening the outer surface of the hedge; which should always be avoided, as it often causes the interior shoots to rot for want of air, especially in thorn and other deciduous hedges.

HEIR APPARENT.—A person so called in the lifetime of his ancestor, whose right of succession is indefeasible, provided he outlive the ancestor; as the right of the next heir to the throne, or to an estate under a deed of entail, or under the marriage contract of his parents.

HEIR-AT-LAW.—A person who succeeds to another by descent. Both in England and Scotland, estates, in the absence of a different special destination, descend to heirs in the direct line, however remote. A landed estate descends to sons, in the order of their seniority, the issue of the elder son always excluding the intermediate younger son, and so on through the whole of the sons. It is only in default of such issue that daughters succeed, and then they succeed equally. By this rule the son of an eldest son, and failing him and his issue, the daughters of an eldest son, equally among them and their descendants, exclude the other sons and daughters of the ancestor, and so on through all the ancestor's children. On the entire failure of lineal descendants, the estate goes to collateral heirs, that is, the ancestor's younger brothers, in the order above mentioned, and their issue. On the entire failure of collateral descendants, the heirship devolves upon the ancestor's father, then collaterally to the ancestor's uncles and their descendants; whom failing, to his aunts (the latter equally) and their descendants. It is only on the failure of all these that the succession opens to the grandfather, and next, to his relatives. There is no succession by or through the mother, unless the estate came from her.

HEIR BY DESTINATION, sometimes called "heir of provision," is a person called to succeed by the will of the proprietor, either directly, or on the failure of persons to whom the estate is primarily conveyed. Any absolute proprietor executing a conveyance of his estate can regulate the order of succession; but, unless the specified destination be protected and enforced by certain legal prohibitions and restraints, a hope of succession is merely created, which may be defeated by each heir as he enters on the possession.

HEIR PRESUMPTIVE.—One who, if his ancestor should die under certain circumstances, would be his heir, but whose right of succession may be defeated by various contingencies, such as the subsequent discovery of a nearer heir, even though by posthumous birth, or the special conveyance of the estate by the ancestor to another person.

HELLEBORE.—A poisonous plant deriving its name from *helen*, to cause death, and *bora*, food. There are two species of this plant found wild in England, *The green hellebore* grows in woods and thickets, on a chalky soil, blowing drooping green flowers in April and May. The root is fleshy, black, with numerous long stout fibres, very acrid and purgative. The stem is erect, round, and forked, about eighteen inches in height. The fruit consists of three to four short wrinkled capsules. *The stinking hellebore*, also known under the various names of bear's foot, bitter wort, ox-heel, &c., like the last-named species, grows in meadows, shady places, and hedges, particularly on a chalky soil, producing numerous green flowers tinged with purple at the edges, which bloom from February to April. The flowers stand each upon a single bare stalk. The leaves are large, each rising singly from the root, on a footstalk of six inches in length. *Hellebore* is sometimes medicinally employed, but it should never be administered without the sanction of a properly qualified practitioner. In case of poisoning by *hellebore*, besides inducing immediate vomiting, the proper antidotes are mucilaginous drinks in very large quantities, such as the decoctions of oatmeal, pearl barley, linseed, marsh-mallows, or milk and water; topical bleeding over the stomach, when the tenderness is great, may also be advantageously resorted to; after which the poisonous matter will be most effectually counteracted by diluted vinegar, juice of lemon, or other vegetable acids.

HEMLOCK—A poisonous plant, of which there are two kinds, the water hemlock and the common. The common hemlock grows upon a stalk rising to the height of five or six feet. It is hollow, jointed, and thickly marked externally with brown spots. The lower leaves are very large, of a shining green colour, with long concave footstalks. The upper leaves are much smaller. *The water hemlock* is found growing on the borders of pools and rivers; it strongly resembles the before-mentioned species, only that the stem is not spotted, and the odour of the plant resembles that of parsley; while that of the common hemlock is nauseous and peculiarly unpleasant. In small doses it is found useful for affording relief in malignant diseases. The usual remedies resorted to in cases of vegetable poisonings are to be administered when hemlock has been incautiously introduced into the stomach.

HEMP.—A very valuable plant of the nettle tribe. It is not cultivated to any extent in England, and is chiefly confined to the counties of Suffolk, Norfolk, and Lincolnshire, where it has proved successful and remunerative. The objections to this crop are, that its coming in the midst of harvest is embarrassing, and that the attention it demands in every stage of its progress is too great, where it is only a secondary consideration. One of the valuable properties of hemp is, that it effectually expels vermin from plantations of cabbages; if it be sown on the borders of fields, &c.,

planted with that vegetable, no caterpillar will infest it. It also possesses the anomalous property of growing, without degenerating for a series of years, on the same ground, provided the land is well manured. It may be grown in the following rotation:—


1. Fallow. 2. Wheat. 3. Grasses. 4. Hemp. 5. Oats. The soils most suitable are those of the deep, black, putrid vegetable kind, which have a situation low, and somewhat inclined to moisture, as well as the deep mellow, loamy, or sandy sorts. The seed may be sown in April or May, from two to three bushels per acre, either broadcast, and hoeing out the plants to a distance of sixteen or seventeen inches, or by the drill, at the space of two feet and a half. In the autumn the plants are pulled, the male plants first, and the female plants six or seven weeks afterwards, when they have ripened their seed. Thus there are two harvests of the hemp crop. The male plants are readily known by their faded flowers and yellowish colour. They are then tied in small bundles, and carried to the pool where they are to be steeped. The process of steeping, commonly lasts five or six days, and is continued until the outside coat of the hemp readily separates. It is then carefully and evenly spread on some grass turf, where it remains for three or four weeks, being turned over about twice every week, by which the decomposition of the woody part of the stem is materially accelerated. It is next carried to the harn, where it is bruised by the break, and then bound up into bundles, and carried to market.

HENBANE.—An annual herb, found growing in hedges and at the roadsides. The root is spindle-shaped, the leaves soft, pliant, sharply lobed, downy, and viscid, exhaling the powerful and oppressive odour which is emitted by all the rest of the plant. The flowers, which appear in July, are numerous, of an elegant straw colour, streaked with dark purple veins. This plant is peculiarly fatal to poultry, hence its name; it intoxicates hogs; but cows, horses, dogs, and goats are able to bear a tolerable proportion before they are affected. If more than a small portion of the leaves have been swallowed, brisk emetics ought instantly to be taken; and after discharging the contents of the stomach, it will be necessary to administer emollient and oily clysters, to repeat them as often as they are ejected, and to drink large quantities of vinegar or lemon-juice diluted with water, in a degree proportioned to the state of the stomach.

HERALDRY.—The science of conventional distinctions impressed on shields, banners, and other military accoutrements. Books: *Evans's Grammar*, 13s.; *Tyaz's Flowers*, 7s. 6d.; *Planche's Facts*, 12s.; *Montagu's Guide*, 18s.; *Tyaz's Handbook*, 1s.; *Barrington's Illustrations*, 5s.; *Clarke's Introduction*, 18s.; *Hamerton's Observations*, 3s.; *Glossary of Forms*, 16s.; *Book of Crests*, 21s.—See **ARMS**, **COATS OF**; also *Dictionary of Useful Knowledge*, article **HERALDRY**.

HERB ESSENCE.—Put into a saucepan, two tablespoonfuls of tarragon vinegar, a quart of good consommé, a bunch of fine herbs, and a little pepper; simmer very slowly till reduced to one-half; then take out the herbs, and add a tablespoonful of chervil and tarragon, chopped very fine; having simmered again for a few minutes, squeeze in the juice of a lemon. This is excellent as a sauce for chops, steaks, &c.

HERB PUDDING.—Pick two handfuls of parsley leaves from the stems, one handful of spinach, two hearts of lettuce, a handful of mustard and cress, half a dozen leaves of white heat, and a small handful of chives: wash, and hoil all together for three minutes; drain the water from them, and wash them very fine; mix well, and add salt and pepper. Have ready a batter made of an ounce of flour, a pint of thin cream, and two eggs; stir it into the herbs, cover the dish with a good crust, and bake in a moderate oven.

 Parsley leaves, 2 handfuls; spinach, 1 handful; lettuce, 2 hearts; mustard and cress, 1 handful; white beet, 6 leaves; chives (small), 1 handful; salt and pepper, to flavour. *Batter:* flour, 1oz.; cream, 1 pint; eggs, 2; crust, sufficient.

HERBS.—The various uses to which herbs are put, is a fact pretty well known to every housewife. In the majority of cases herbs are purchased at shops, but it would always be as well, where practicable, to set by a certain portion of the kitchen garden for the culture of this useful class of plants. *When herbs are to be dried*, they should be gathered when they begin to flower, on a dry day, as soon as the dew is off. The tops, leaves, or the whole herbs, should at once be cleared from discoloured or decayed leaves; screened from earth or dust; placed on hurdles covered with blotting-paper, and exposed to the sun or the heat of a stove, in a dry, airy, place. The quicker they are dried the better, as they have less time to become mildewed, or ferment; hence, they should be spread thin, and frequently turned. When dried, they should be well shaken in a large sieve or basket, to get rid of the insects and other foreign bodies. Almost all herbs in drying, give out a certain portion of their aromatic properties; and hence, they should not be continued in the sun, or near the stove, longer than necessary. When dry, they should be coarsely powdered and at once put into wide-mouthed glass bottles, and well corked for future use. In this way, they may be kept with their flavour unimpaired for twelve months at least; but if they are exposed to the air by being hung up in bundles, as is the usual practice, they become too much dried, and their flavour is soon dissipated.—See **BASIL**, **FENNEL**, **MARJORAM**, **MINT**, **PARSLEY**, **THYME**, &c.

HERRING.—A well-known small sea-fish. As an article of food, fresh herrings, although somewhat oily, are wholesome and agreeable if partaken of moderately; but if kept long they are apt to offend the stomach, and are only fit to be eaten by persons of strong digestion. A large admixture of po-

tatoes or other vegetable food, tends, however, to counteract, to a certain extent, the unwholesome properties of this fish when dried.

HERRINGS BAKED.—Take off the heads of the fish; remove the entrails; wash and dry them with a cloth; sprinkle them with a seasoning of black pepper, cloves, and salt, mixed; tie paper over them; put them in a pan with a few bay leaves, and bake in a moderate oven. They may be eaten either hot or cold, and will keep for many months.

HERRINGS BOILED.—After the herrings have been gutted, cleansed, and dried, rub them over with a little salt and vinegar. Skewer their tails in their mouths, and put them into boiling water; in about ten minutes they will be done. Serve them with melted butter and parsley.

HERRINGS BROILED.—Having prepared them as in the preceding receipt, dredge flour over them, and lay them upon a gridiron over a clear fire; they will soon be dressed, and need only be turned once. They may be served with vinegar and mustard.

HERRINGS FRIED.—Scale and prepare the herrings; take out the soft roes and fry them till they attain a light brown colour, to form a garnish. Fry the fish in butter, with or without onions, according to taste, and serve with melted butter and parsley.

HERRINGS RED, TO DRESS.—Skin, open, and trim red herrings. If old and dry, pour some hot small beer or water over them; and let them steep for half an hour. Yarmouth bloaters seldom need soaking. Broil them over a clear fire at a considerable distance, or before the fire; rub them with good oil or fresh butter while broiling, and rub on a little more when they are served. Serve them very hot, with scooped cold butter; or with melted butter and mustard, and mashed potatoes and parsuips.

HICCOUGH OR HICCUP.—A spasmodic affection of the stomach and diaphragm, arising from some peculiar irritation. It is generally symptomatic, but in some instances it appears as a primary disease. When prevailing as a primary affection, hiccough is never attended with danger, and may, in general, be easily removed; but when it arises in any acute disorder, or after a mortification has taken place, it may always be looked upon as the forerunner of death.

Treatment.—A common hiccough is often removed by taking a few sips of cold water in quick succession, or by a sudden excitement of some degree of fear or surprise. When simple means do not answer, recourse must be had to anti-spasmodics, the most useful for which, in this instance, seem to be ether, musk, and opium, combined, or given separately. In the hiccough incidental to youth or old age, an almost certain remedy is, a small quantity of any powerful acid, as a teaspoonful of vinegar or lemon-juice, or a little peppermint water acidulated with a few drops of sulphuric acid.

HISTORY, ENGLISH.—Books: *Hume & Smollett's*, 80s.; *Ditto*, continued by *Parr*, 52s. 6d.; *Continued by Hughes*, 6ss.; *Lingard's*, 35s.; *Abridged by Burke*, 5s.; *Mackintosh's*, 21s.; *Mahon's*, 94s.; *Martineau's*, 42s.; *Macaulay's*, 68s.; *Knight's*, £5 12s.; *Gleig's*, 19s. 6d.; *Goldsmith's* (*Pinnock's*), 6s.; *Corner's*, 4s.; *Hamilton's*, 4s.; *Macfarlane's*, 39s.; *Marcel's*, 5s.; *Markham's*, 6s.; *Mylius's*, 4s.; *Palgrave's*, 3s. 6d.; *Trimmer's*, 5s.; *Hallam's*, 18s.; *Selby's Events*, 3s.; *White's Landmarks*, 1s. 6d.; *Troutbeck's Abridged*, 2s.; *White's*, for *Junior Classes*, 1s. 6d.; *Bond's*, for *Young Persons*, 3s.; *Dickens's*, for *Children*, 10s. 6d.; *Woolton's Conversations*, 4s.; *Davy's Letters*, 2s. 6d.; *Pinnock's Made Easy*, 2s. 6d.; *Catechism*, 1s.; *Historical Reason Why*, 2s. 6d.; *Vade Mecum*, 2s.; *Useful History*, 3d.

HISTORY, GRECIAN.—Books: *Goldsmith's* (*Pinnock's*), 5s. 6d.; *Grote's*, 16s.; *Wordsworth's Pictorial*, 31s. 6d.; *Mitford's*, 39s.; *Keightley's*, 6s. 6d.; *Smith's*, 7s. 6d.; *Corner's*, 3s.; *Finlay's*, 12s.; *Chambers's Course*, 2s. 6d.; *Carr's*, 7s. 6d.; *Schmitz*, 7s. 6d.; *Thirlwall's*, 37s. 6d.; *Guy's Catechism*, 9d.; *Sewell's First* 3s. 6d.; *Hendry's*, for *Children*, 2s.; *Levien's Outlines*, 2s. 6d.; *Neale's*, for *the Young*, 3s.; *Carr's Questions*, 1s.; *Taylor's Prints*, 2s. 6d.; *Keightley's Elementary*, 3s. 6d.; *Keightley's Questions*, 1s.

HISTORY, MISCELLANEOUS.—Books: **FRENCH:** *Michel's*, 28s.; *Bussey's Pictorial*, 30s.; *Bonnechose*, 6s.; *De Porquet's*, 3s. 6d.; *Des Carrières*, 7s.; *Roche's*, 15s.; *Croue's*, 18s.; *White's*, 3s. 6d.; *Corner's*, with *Questions*, 2s. 6d.; *Sedgwick's*, for *Schools*, 3s. 6d.; *Cockayne's Outlines*, 3s. 6d.; *Cranbourne's*, for *Children*, 2s. 6d. **GERMAN:** *Dunkam's*, 18s.; *Markham's*, 6s.; *Kohlrausch's*, 14s.; *Menzel's*, 10s. 6d.; *Corner's*, for *Schools*, 3s. 6d.; *Kugler's Pictorial*, 12s.; *Hawkins's Spirit*, 10s. 6d. **ITALIAN:** *Crockford's* 6s.; *Ughuham's*, 25s.; *Marrotti's*, 14s. **RUSSIAN:** *Bell's*, 10s. 6d.; *Kelly's*, 7s.; *Rabbe's*, 2s. 6d.; *Schmitzler's*, 28s. **SPANISH:** *Knight's*, 2s.; *Cullot's*, 12s.; *John's*, 2s. 6d.; *De Castro's*, 6s.; *Dunlop's*, 26s.

HISTORY, ROMAN.—Books: *Arnold's*, 43s.; *Lardner's Cyclopadia*, 7s. 6d.; *Liddell's*, 28s.; *Niebuhr's*, 24s.; *Schmitz's*, 7s. 6d.; *Strickland's*, 10s. 6d.; *Keightley's*, 6s. 6d.; *Goldsmith's* (*Pinnock's*), 5s. 6d.; *Pinnock's Questions*, 2s. 6d.; *Guy's Elementary*, 9d.; *Hendry's*, for *Children*, 2s.; *Fox's*, for *Young Persons*, 3s.; *Corner's Youth's*, 3s. 6d.; *Child's First*, 2s. 6d.

HISTORY, UNIVERSAL.—Books: *Tytler's*, 21s.; *Bunsen's*, 33s.; *Field's*, 11s.; *Weber's*, 9s.; *White's*, 6s.; *Wright's*, 3s. 6d.; *Stafford's*, 3s. 6d.; *Harding's*, 5s.; *Gerard's*, with *Tourrier's Charts*, 25s.; *Stoddard's*, 5s.; *Willard's*, 9s.; *Quin's*, 6s.; *Compendium*, 3s. 6d.; *Cyclopadia*, 10s. 6d.; *Epitome*, 1s.; *Beckmore's Instruction*, 7s.; *Patton's*, 2s.; *Peter Parley's Wonders*, 3s. 6d.

HIVE.—See **APIARY**.

HODGE PODGE.—A savoury dish, prepared as follows:—Cut a piece of brisket of beef into pieces, put water to it, a bunch of sweet herbs, an onion, some whole pepper in a piece of mufin, a carrot, and two or three heads of celery, cut into pieces; stew all till tender. Lettuce may be added, young cabbage, and a few green peas.

HOEING.—An operation performed in gardening and agriculture. The purposes of this operation are fourfold; namely, to cut

down weeds at or under the surface, and to open the surface of the ground, so as to render it pervious to heat, air, and moisture, and to draw up or accumulate the soil about the stems of plants; and, lastly, to form a hollow gutter or drill, in which to sow or insert the seeds of plants. The use of the hoe for any of these purposes requires dry weather. The best hoe, when deep stirring the soil between drilled crops is performed, is the Spanish hoe, *fig. 1*, or the Vernon hoe,

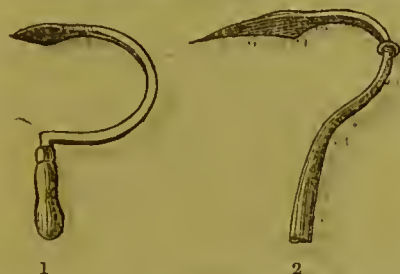


fig. 2. The flat, or common hoe, is only useful in cutting down weeds; and, as it is used in general, it performs little more. Hoeing between rows of crops is sometimes performed by what is called a hoe-plough, which is a small plough having a share with double fins, drawn by one man and pushed by another. The Dutch hoe is very useful for this service, and may also be efficiently used for the purpose of cleaning walks, or scraping turf or mud from roads or courtyards.

HOG.—See *FIG.*

HOLLY.—A hardy evergreen shrub, of



which there are several varieties. The holly

will thrive only in a strong deep, dry, loamy soil. If grown as single ornamental shrubs, they should not be overshadowed by other trees; and if the land is manured, so much the better. The best way of forming holly-hedges is to procure large plants from some nursery; but a less expensive mode, although requiring more time, is as follows:—Gather a sufficient quantity of holly berries when ripe; then dig a hole three or four feet deep, and throw the berries in, crushing and mixing them with some fine soil at the same time; close the hole with the soil taken out, and throw some litter, or other covering, over the whole, to prevent the wet or frost penetrating. Take them up and sow them in March. They will produce fine little plants the first season, and will arrive at perfection in about three years. The best time for cutting hollies is early in the spring, about the end of February, before they have commenced shooting. Never clip them with shears, but cut them with a very sharp knife.

HOLLYHOCK.—This plant requires good old garden soil, well trenched over to the depth of two feet, with plenty of thoroughly decomposed manure, such as old cucumber-beds, or nightsoil mixed with the earth. If the subsoil is wet, they will thrive remarkably well in the summer, but in the winter, wet is very injurious to them when old plants are allowed to remain; to prevent which remove the mould to the depth of one or two inches round the neck of the plant, and fill up with white sand, about six inches round the stem, level with the surface. It is simply to preserve them from wet, insects, and slugs, from which, in the winter, they are apt to suffer very much, if not killed. Young plants should be planted every year, as you would dahlias, if you wish to secure fine flowers. They may be propagated by single eyes in July and August; also by cuttings in the spring, placed on a slight bottom heat. Young plants raised from summer cuttings are best preserved by re-potting them in October into large pots, the larger the better, in light, rich, sandy earth, and placed in a cold frame—thus they will grow during the winter. In March or April turn them out into the open ground, and they will bloom as fine and as early as if planted in the autumn. Plant them not less than four feet from row to row, and three feet apart in the row; if grouped in beds, not nearer than three feet each way. They will grow well in the shade of distant trees, but by no means must the roots interfere. In May, when the spikes are grown a foot high, thin them out according to the strength of the plant; if well established and very strong, leave four spikes; if weak, two or three. The perfection of this flower consists in the petals being of thick substance, the edges smooth and even. The florets occupying the centre must be compact, closely arranged, rising in the middle to a half globular form, with a stiff guard petal extending about half an inch, or in proportion to the size of the centre ball, so that the different parts of the flower have a uniform appearance. Second—the arrangement of

the flowers on the spike should be regular, not crowded together into a confused mass, nor loosely hanging with open spaces between each flower, but so disposed that the shape of each may be distinctly seen, and fully blown, the uppermost covering the top; and nothing can add more to its beauty than a few small green leaves between the flowers, which give it an elegant and graceful appearance. The third point is colour—the brightest, strongest, and most distinct stand first; but it is desirable to obtain all imaginable shades. Stake them before they get too high, and secure them well in by tying, and they will grow erect. The most robust grower does not require a stake higher than four feet from the ground. If the weather is dry, they must be watered with a solution of guano, or any other liquid manure, poured carefully round the roots, avoiding pouring it on or too near the stems. To grow the flowers fine, cut off the lateral shoots, thin the flower buds, if crowded together, and take out the top of the spike, according to the height desired, paying attention to the usual height and habit of the plant. Observe, by topping it you may increase the size of the flower, but at the same time shorten its duration of flowering, and perhaps disfigure its appearance.

HOME.—The word "home" brings with it a certain charm to English ears, and awakens associations of domestic peace, comfort, and happiness. There are, however, exceptional cases, where, owing to the existence of some discordant elements, home is the reverse of enjoyable, and a man is driven to seek for comforts elsewhere than in his natural abiding place. It is an undoubted truth that the happiness of home depends upon the management and tact of the housewife, and her guiding principle should be to create, if possible, such charms and pleasures in the home over which she presides, as shall not be attainable elsewhere. When this subject is examined more closely, it will be found that the proper management of a home is as much the *business* of a wife, as the going forth to labour is that of the husband; and it is, therefore, the duty of every woman, as it should be her pleasure, to provide home enjoyment for a man as a recognition of his just claims, and a recompense for his daily toil. This duty is not only based upon broad principles, but it also consists in the exercise of many trifling acts, and the performance of many minor offices, which depend upon the peculiar circumstances in which a wedded pair happen to be placed. Among the numerous golden rules, however, which go far to secure domestic happiness, the following may not be inappropriately enumerated:—Keep the house clean and tidy, and the rooms snug and comfortable. Never create a commotion in the household while your husband is at home; but defer all domestic operations, such as washing, removing furniture, &c., until he goes out, and bring your labours to a conclusion before he returns. Do not interfere with your husband's arrangement of any articles of use, or alter the disposition of his books,

papers, &c. Have the dinner, tea, or whatever meal your husband partakes of, ready for him by the time he comes home; the number of unhappy contentions which have been caused by a disregard of this rule, is beyond conception. Endeavour to discover your husband's tastes and predilections; and, having discovered them, miss no opportunity of administering to them. Learn to discern his character and disposition, so that you may regulate your conduct in such a manner as not to offend or displease him. Do not scold your servants before your husband; this is a common method by which bad housewives endeavour to excuse their own shortcomings. Contrive, from time to time, new pleasures and fresh gratifications; these are certain to be appreciated, and may be projected by an ordinary exercise of judgment and intelligence. Suffer no one, not even the nearest relative or dearest friend, to interfere in the management of your domestic concerns; do that which you consider to be right, and it is almost certain to be so. Discourage the visits of mere gossips, who, by uselessly monopolising your time, prevent you from paying proper attention to your domestic duties. Remedy all defects of the household the moment that they are perceived; among these may be mentioned smoky chimneys, creaking doors, shaky windows, stubborn locks and bolts, and rickety furniture; the existence of these defects form a fruitful source of discomfort and grumbling. Provide articles of constant requirement in time; the neglecting to send for this or that until the very moment when it is wanted, occasions waste of time, inconvenience, and commotion. Be always cheerful and good tempered; do not make any little ailments, with which you may be visited, the theme of your conversation; and endeavour to bear the crosses and vexations of life with resignation, equanimity, and fortitude. *To husbands* we would say, regard your home as the place where both duty and inclination should lead you; do not suffer yourself to be weaned from it by fleeting and unstable attractions abroad, for these cannot conduce to any permanent pleasure, and are calculated to be productive of much unhappiness to you and yours. Forget all business cares when you enter your home, and enter cheerfully into such amusement and conversation as you think are calculated to please. Show that you appreciate the efforts which are being made to promote your comfort, by a few words of encouragement and gratitude, timely spoken and tenderly expressed. Avoid fault-finding and a display of petulance and ill-temper, at any little accident or irregularity. Remember that perfection is an impossibility, and a good housewife is sufficiently grieved by a domestic misadventure, without needing your reproach by way of aggravation. Endeavour to conform your habits to the arrangements made, and do not scruple to make any little personal sacrifices that may conduce to the comfort of the household generally. Do not intermeddle with the purely domestic regulations of the

house; as, for instance, giving orders directly contrary to those already given by your wife; such a step as this is not only offensive to her; but is calculated to engender confusion and disrespect among the servants. If you have any complaint to make against the domestics, let it be made through the medium of your wife, and not by you directly; the less a master speaks to a female servant the better will he be served and respected. Second the efforts that are made for order and regularity, by being orderly and regular yourself; thus, instead of throwing articles of wearing apparel, or books and papers about in all directions, put them in the place usually appointed for them. Do not occupy yourself too much in reading newspapers or books, or in any other exclusive and selfish pursuit. Entertain company occasionally, and have a few friends now and then to grace your fireside; it is possible for two persons with the best intentions and the most amiable of tempers, to fail in amusing and interesting each other, if constantly left to their own resources. Lastly—and this applies equally to husband and wife—do nothing surreptitiously, and discountenance anything like separate interests. Repose the strongest faith and confidence in each other, and strive to avoid any act or deed which can in any way disturb this mutual reliance.

HOMŒOPATHY.—A system in medicine of comparatively recent introduction, which professes to cure diseases by minute doses of medicine, capable of producing in healthy persons affections similar to those which it is intended to remove. Books: *Laurie's Domestic Homœopathic Medicine*, 5s., and 16s.; *Jahr's Pharmacopœia*, 12s.; *Newman's Family Assistant*, 5s.; *Jahr's Handbook*, 12s.; *Henriquet's Dictionary*, 4s. 6d.; *Pulle's Physician*, 7s. 6d.; *Mother's Guide*, 1s. 6d.; *Curtis's Practice*, 4s.; *Dunford's Remedies*, 9s.; *Hamilton's Guide*, 5s.; *Curie's Principles*, 5s.; *Sampson's Truths*, 5s. 6d.

HONEY.—The sweet substance elaborated by the bee from the juices of the nectaries of flowers, and deposited in the cells of wax, forming the honeycomb. The nature of honey is very much influenced by the species of flowers from which it is obtained, and the vegetation which supplies the bees with food. The honey afforded by bees that have access to wild thyme, lavender, rosemary, and some other flowers, abounding in aromatic and essential oils, is of the first quality: while it is said to be very bad when the bees are located near to fields of buckwheat. The common honey of Britain being chiefly derived from agricultural crops or wild plants of the leguminous kind, such as clover, beans, gorse, and broom, is, when pure, of excellent quality; the Hampshire honey is reckoned the best in England. New honey appears a uniform transparent syrup, varying considerably in colour from nearly white to a yellowish brown, intensely sweet to the taste, but always having more or less of a peculiar flavour and an aromatic odour; and, besides its sweetness, it has a sharp acidulous taste, which becomes sharper with age, at the same time that

the colour grows deeper. Virgin honey is that which is made in a new clean hive by bees that have never swarmed. In taking honey from the hive, pressure is generally employed, by which a larger quantity of honey is obtained, but at the same time particles of wax, and the intrusion of the bee maggot deteriorate its quality and flavour. As an article of food, honey is found to be wholesome, if moderately employed; but when indulged in freely, it proves to be laxative, and in some habits produces colic. The custom of giving an excess of honey to children is to be particularly discountenanced, as a most injurious practice. As a medicine, honey is employed in the preparation of oxymels and gargles; it is also employed as a vehicle for administering nauseous and unsightly medicines. In affections of the throat and lungs, it is frequently found to be remarkably efficacious. If fermentation should take place in honey, it is no longer calculated for ordinary use, and is only fit to be converted into mead or vinegar.

HONEY CAKES.—Take a pound and a half of dried and sifted flour, three-quarters of a pound of honey, half a pound of finely powdered loaf sugar, a quarter of a pound of citron, half an ounce of orange peel, cut small, half an ounce of ginger, and half an ounce of cinnamon. Melt the sugar with the honey, and mix in the other ingredients; roll out the paste, cut it into small cakes of any form, and bake on tins in a moderate oven.

Flour, $1\frac{1}{2}$ lb.; honey, $\frac{3}{4}$ lb.; sugar, $\frac{1}{2}$ lb.; citron, $\frac{1}{4}$ lb.; orange peel, $\frac{1}{2}$ oz.; ginger, $\frac{1}{2}$ oz.; cinnamon, $\frac{1}{2}$ oz.

HONEY-DEW.—An exudation either from the leaves of plants or from insects, and which proves highly injurious to vegetation, by covering the surface of leaves with a thick glutinous substance, and causing, by its adhesiveness, dust and other filth to accumulate upon them, till their pores are at last completely sealed up, and their functions become suspended. The formation of honey-dew may be in a great measure prevented by applying salt and water to the soil where the plant is growing, one ounce of sea salt (chloride of sodium) to a gallon of water is sufficiently powerful for this purpose. When honey-dew has really appeared, the only remedy is to syringe and wash the leaves of the plant as soon after the discovery as possible.

HONEY SOAP.—Cut into thin shavings, two pounds of common yellow or white soap; set it over the fire with just enough water to keep it from burning: when quite melted, add a quarter of a pound of honey, and stir the mixture till it boils; then take it off and add a few drops of any agreeable perfume: pour it into a deep dish to cool, and then cut it into squares.

HONEYSUCKLE.—A twining plant, of which there are several varieties; all the sorts may be propagated by layers or cuttings. Each cutting should have four joints, and only one joint should be left above ground; they should be taken off in autumn, and

inserted in a shady border; tender and scarcer kinds should have the assistance of a hand-light, as the wood is generally pithy.



The honeysuckle will grow in almost any soil, provided it be not too dry.

HONEY, to PURIFY.—Take, for every five pounds of honey, three ounces of powdered chalk, five ounces of charcoal powder, previously washed and dried, and the whites of fifteen eggs beaten up in a pint of water; set the honey, the chalk, and a quart of water, to boil for two minutes in a vessel, larger by one-third than the bulk of its contents; then throw in the charcoal, mixed with the white of egg, and boil for two minutes longer, stirring well the whole time. When boiled, set it to cool for about a quarter of an hour, and then pass it through a hair sieve or bag; as the honey which runs off first will be discoloured a little by the charcoal, return it to the bag until all comes away clear.

HONEY WATER.—Take of rectified spirits, eight ounces; oil of cloves, bergamot, and lavender, of each half a drachm; musk, three grains; yellow sanders shavings, four drachms. Digest for eight days; add two ounces each of orange-flower water and rose water.

HOOPING COUGH.—This disease comes on with difficulty of breathing, thirst, quick pulse, hoarseness, cough, and the usual symptoms of a common cold, aggravated. This condition may endure for two or three weeks, till at length the expirations made in coughing become longer, and more rapid and violent; the child, in its sudden gasp to recover breath, making in the larynx and glottis, that peculiar whoop that has given name to the disease. This whoop or hoop,

once established, the cough becomes spasmodic, and is continued with rapid persistency till a little mucus is expelled, or the contents of the stomach are ejected, when the paroxysm ceases, and the child for some hours has no return of the symptoms. As this is both a spasmodic and an imitative disease, children who are in health should be carefully kept from the sight and sound of a patient affected with it.

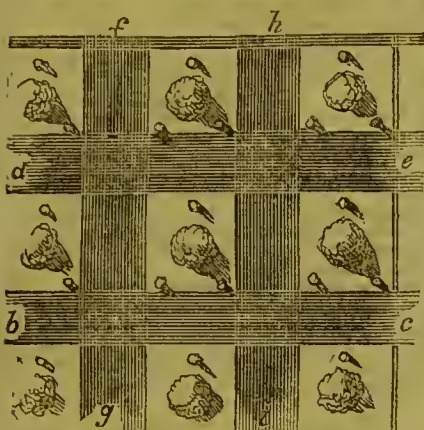
The great object to be obtained in the treatment of this disease, is, to procure a free expectoration and vomiting, so as to reduce the length and severity of the paroxysms. This effect is to be obtained by repeated small doses of tartar emetic, so as to keep up a constant state of nausea and relaxation. For this purpose the following powders are to be employed, one being given every three or four hours:—Take of

Powdered sugar . . .	1 scruple.
Tartar emetic . . .	2 grains.
Grey powder . . .	15 grains.

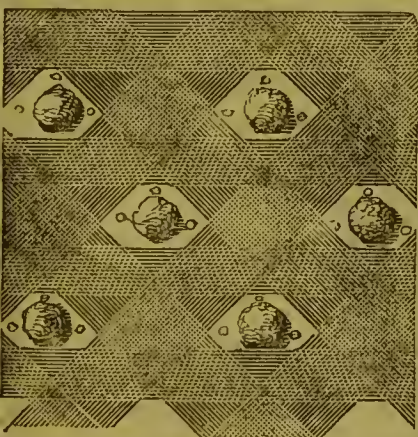
Mix well, and divide into twelve powders, for a child from two to three years; into eight powders for a child from three to five years; and into six powders to all above that age. To youths and adults affected with whooping cough, a dose of laudanum varying from fifteen to thirty drops, by suspending the spasmodic action, will generally be found all that is necessary to cure the disease. In no affection of childhood is change of air more necessary; and, if the weather is congenial, the patient cannot be too soon removed. Benefit is sometimes derived by rubbing the throat and chest of the child with a stimulating embrocation, though as a general rule, nothing is required beyond the tartar emetic, and keeping the stomach and bowels regular.

HOP.—A perennial-rooted plant with an annual twining stem, which, on poles or in hedges, will reach the height of from twelve to twenty feet, or more. The hop is propagated by dividing the roots in autumn and spring. It requires a deep rich soil, which should be frequently stirred, and kept quite free of weeds. The plantation should be renewed every seven or ten years, according to circumstances. In field-culture the hop-ground should be harrowed and rolled, and reduced to as fine a state as possible about the end of March; and from one hundred and fifty to two hundred bushels of lime to the acre, according to the nature of the soil, should be applied to the surface, and harrowed in. There are two methods of arranging the plants in a hop-ground, one in squares, and the other in quincunx; and of these two modes the quincunx is the preferable, because the plants, standing independently, are more exposed to sun and air; a greater number of plants can be placed on the same extent of ground, and the soil can be cleaned nearer the plants with the horse-hoe. In the accompanying engraving is shown the square method of planting, in which the hills of hops, such as *a*, are each surrounded in a triangular form by three poles. In clearing the ground with the horse-hoe from *b* to *c*, one pole is closely

passed at each hill on the right, and two poles are as closely passed on the left hand; and the same happens in clearing the ground from *d* to *e*. On clearing the ground in the



direction at right angles to the former, as from *f* to *g* and *h* to *i*, one pole is passed closely on both hands at each hill. The intersecting lines *b c*, and *d e*, by *f g* and *h i*, represent the space of ground stirred by the horse-hoe; and it will be observed that while a square piece of ground included by every four hills is stirred twice, a considerable space in the angles on each side of the single poles in the square piece of ground surrounding each hill is left untouched by the hoe, which must be cleared by manual labour at an enhanced cost. The quincunx method is illustrated in the following engraving. Of the two methods, there-



fore, the quincunx not only saves much manual labour in clearing the land, but stirs it the oftener. In dressing the hop plant, the operations of the first year are confined to twisting and removing the haulm. The operation of twisting, is confined to such plants as have been planted in the spring,

and are not expected to produce any crop that season. It is performed at the end of June or in July, and consists in twisting the young bines into a bunch or knot, so that by discouraging their growth, the roots are enabled to spread out more vigorously, and to acquire strength previously to the approach of the winter season. Removing the haulm takes place soon after Michaelmas, and consists simply in cutting it over with a sickle, and carrying it off the field for litter or burning. The yearly operation of stacking or setting the poles commences towards the end of April, or at whatever period, earlier or later, the shoots may have risen two or three inches. Particular attention should be paid to proportion the length of the poles to the probable strength of the bines; for, if the pole be too long, it draws up the bine, and makes it bear less; if it be too short, the bines entangle when they get beyond the poles, and cause confusion in the picking. Hops are sometimes trained successfully in the espalier form, as seen in the engraving, on poles five feet high



and three feet apart, with a long pole or two at such intervals as may be desired, fixed to the top of the horizontal ones, to keep them steady. A plant is set at each stake, and the rows are formed one way across the field. This method may be adopted with success where poles are scarce, and where the ground is exposed to winds. All the male plants should be placed on the long poles, that their farina may drop on the female flowers on the lower ones. The taking of the crop is a most important operation in hop economy. Hops are known to be ready for pulling when they acquire a strong scent, and the seeds become firm and of a brown colour, which, in ordinary seasons, happens in the first or second week of September. When the pulling season arrives, the utmost assiduity is necessary on the part of the planter, in order that the different operations may be carried on with regularity and despatch, as the least neglect in any department of the business proves, in a great degree, ruinous to the most abun-

dant crop, especially in precarious seasons. *The operation of drying hops* requires much experience and practice, to perform it successfully. The hops are spread on a hair cloth, and from eight to ten, sometimes twelve inches deep, according to the dryness and wetness of the season, and the ripeness of the hops. The general rules are, to begin with a slow fire, and to increase it gradually till, by the heat on the kiln, and the warmth of the hops, it is known to have arrived at a proper height. An even steady fire is then continued for eight or ten hours, according to the state or circumstances of the hops, by which time the end of the hop-stalks become quite shrivelled and dry, which is the chief sign by which to ascertain that the hops are properly and sufficiently dried. They are then taken off the kiln, and laid in a large room or loft till they become quite cool. *In the choice of hops* care should be taken to select those that have large cones, that are most powerfully odorous, and most free from leaves, stems, scaly fragments, and sticks, and which, when rubbed between the hands, impart, in the greatest degree, a yellowish tint and glutinous feeling to the skin. The tightness with which they are packed should also be noticed, as without being very firmly pressed together, and quite solid, they soon spoil by keeping. The finest flavoured hops are those grown in East Kent, and termed the "golden bine;" these possess a lively golden yellow colour. "Country's" and Farnham hops have a greenish yellow colour, and are more expensive than any other variety.

HOP-TOPS.—Hop-tops may be served as a substitute for asparagus. Break off the young shoots of hops, tie them in bundles, boil them with a little meat in the water for twenty minutes; serve as asparagus.

HOPS, MEDICAL USES OF.—Hops are narcotic, tonic, and diuretic; they reduce the frequency of the pulse, and do not affect the head like most anodynes. Used externally they act as an anodyne and discutient, and are useful as a fomentation for painful tumours, rheumatic affections of the joints, and severe contusions. A pillow stuffed with hops also acts as an excellent narcotic, and will frequently procure sleep and ease when all other means have failed. When the powder of hops is mixed with lard, it acts as an anodyne dressing in painful ulcers.

HOREHOUND.—This herb has long been a popular remedy in chronic pulmonary complaints, and is commonly resorted to in cases of coughs and colds. *Horehound tea* is made by infusing an ounce of the herb in a pint of water, for an hour. *Syrup of horehound*, is the tea sweetened and thickened with sugar. *Candied horehound*: mix a pint of horehound juice with eight or ten pounds of white sugar; boil the mixture to a candy height, and pour it, whilst warm, into moulds or small paper cases, well dusted with finely powdered sugar.

HORN.—Among the numerous purposes to which this material is put, is that of converting it into a manure. The shavings and trimmings of horn are excellently adapted

for this purpose; the animal matter in them seems to be of the nature of coagulated albumen, and it is slowly rendered soluble by the action of water; the earthy matter in horn forms the most valuable portion of the manure, and renders it very durable in its effects.

HORNET-STING.—Press the barrel of a watch-key over the part affected, so as to expose the sting, which must be then removed. Lay a rag moistened with harts-horn and oil over the part, and moisten it from time to time.

HORSE, CRITERIA OF.—In choosing a horse, a just knowledge of the exterior conformation of horses generally, and of the essential points in the animal, according to the employment for which he is destined, are necessary matters for every person who intends keeping a horse, to know. The accompanying engraving depicts an ordinary horse, with his various points indicated by certain figures, which bear a corresponding reference to the numbered list below the engraving.



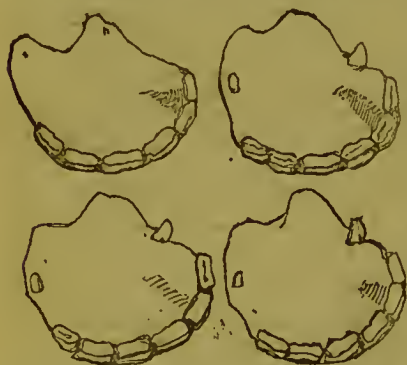
- 1 1. Muzzle parts about the mouth.
2. Gullet.
- 3 3. Windpipe.
4. Crest.
5. Withers.
6. Chest, or Counter.
- 7 7. Girth.
8. Back.
9. Loins.
10. Hip, or Ilium.
11. Croup.
12. Haunch, or Quarters.
13. Thigh.
14. Hock.
15. Shank, or Cannon.
16. Fetlock.
17. Pastern.
18. Shoulder bone, or Scapula.
19. Elbow.
20. Fore-thigh, or Fore-arm.
21. Knee.
22. Coronet.
23. Point of the hock.
24. Ham-string.

The proper conformation of horses in general is as follows: The head should not be

disproportionately large, and should be well set on, that is, the lower jawbones should be sufficiently far apart to enable the head to form that angle with the neck, which gives free motion, and a graceful carriage to it, and prevents its being too heavy on the hand. The eye should be large and slightly prominent, and the eyelid fine and thin. The ear should be small and erect, and quick in motion. The lop-ear indicates dulness or stubbornness; and when it is habitually laid too far on the back, it frequently evinces a tendency to mischief. The nostril in every breed should be somewhat expanded. The neck should be long, rather than short. It should be muscular at its base, and gradually become fine as it approaches the head. The withers should be somewhat high in every horse. The shoulder should be formed in a slanting direction, as it confers mechanical advantage, and easy and pleasant action, and a greater degree of safety. It must not, however, exist in any considerable degree, in the horse of draught, and particularly of heavy draught. The chest must be capacious, for it contains the heart and the lungs, the organs on which the speed and endurance of the horse depend. The loins should be broad, the quarters long, the thighs muscular, and the hocks well bent, and well under the horse. With regard to the colour of a horse, there is no certain rule by which this can be connected with his capacity. As a general principle, dark are preferable to light horses, except in the instance of black, which has fewer good horses within its range, particularly in the lighter breeds, than any other. Grey horses are, also, in some degree, an exception to the rule; for there are many good greys. Bay and brown are esteemed good colours. *The criteria of hardness* are derived from the form of the carcass, which should be circular or barrelled; by which conformation, a greater extent of food is retained, and strength gained to perform the labour required. *The criteria of vigour, spirit, or mettle*, are best derived from trial. It should always be borne in mind that a hot fiery horse is as objectionable as a horse of good courage is desirable. Hot horses may be known by their disinclination to stand still; by their mettle being roused by the slightest exercise, especially when in company. Such horses seldom last long, and under accident are impetuous and frightened in the extreme. A good couraged horse, on the contrary, moves with readiness, as well alone as in company; he carries one ear forward and one backward; is attentive and cheerful, loves to be talked to and caressed, and if in double harness will play with his mate. *The criteria of the racehorse*, derived from form, are, that he have the greatest possible quantity of bone, muscle, and sinew, in the most condensed form. There should be a general length of parts to afford stretch, scope, and elasticity, with great muscles hardened by condition, to act on the length of these parts advantageously. In particular, his hind limbs should be furnished with ample thighs and broad hocks, which should be low set. His fore-arm ought

also to be broad, and the knee, like the hock, should be near the ground. *The hunter* should have somewhat similar proportions to the racer, but with more bulk, to enable him to continue his exertions longer, and to carry more weight. In him a good carcass is essentially necessary, to enable him to go through a long chase, and the more if he be required to hunt more than one day in the week. The hunter should be well formed in his loins, and well let down in his thighs, to propel him forward in his gallop, and give him strength to rise sufficiently to cover his leaps. *The hackney* should be well formed behind, to give him strength, and to propel him forward, it is even of more consequence that he be well formed before; and in this kind of horse the hind parts are somewhat subordinate to the fore, as safety is of more consequence than speed. The head of the hackney should be small, and placed on a neck of due length and substance, so as to form that firmness, and proper resistance to the hand, so pleasant to the feel, and necessary for ease and safety. The shoulders should be oblique and well furnished with muscle, but not too heavy, and the withers in particular should be high. The elbows should be turned rather out than in, and the legs should stand out straight, and by no means fall under the horse, or it betokens a stumbler. The pasterns should be neither too oblique, which bespeaks weakness, nor too straight, which wears the horse out and is unpleasant to the rider. The carcass should be round; the loins straight, wide, and ribbed home; and the thighs of good substance. *Road horses for quick draught*, as coach, chariot, stage, and post horses, require a rising fore-arm, a straight back, and a short quick step. As they approach the hunter form, they are best fitted for quick work; and, as they resemble the best kind of light agricultural horses, they are calculated for heavy draught, as for coaches, &c. But in all, a portion of blood gives courage and durability, and condenses strength into lessened bulk; by which activity is gained. *The criteria of a horse best suited for agricultural labour* are, the head as small as the proportion of the animal will admit; the nostrils expanded, and the muzzle fine; eyes cheerful and prominent; ears small, upright, and placed together; neck rising out from between the shoulders with an easy tapering curve, and joining gracefully to the head; shoulders well thrown back; fore-thigh muscular, and tapering from the shoulder, to meet a fine, straight, sinewy, and bony leg; the hoof circular, and wide at the heel; chest deep and full at the girth; loins or fillets broad and straight, and body round; hips by no means wide, but quarters long, and the tail set on so as to be nearly in the same right line as the back; thighs strong and muscular; legs clean and fine-boned; leg-bones not round, but what is called lathy or flat. The horse attains maturity at five years old, and he is in his prime till eight or nine. If no unfair play be practised, his age may be judged of from his teeth, or, as it is called, *mark of mouth*. The horse is foaled with six molar or grinding teeth in each

jaw; the tenth or twelfth day after, the two front nippers appear above and below, and in fourteen or fifteen days from this, the two intermediate are pushed forward; the corner ones are not cut till three months after. At ten months the incisive or nippers are on a level with each other, the front less than the middle, and these, again, less than the corners; they, at this time, have a very sensible cavity. At twelve months this cavity becomes smaller, and the animal appears with four molar teeth on each side, above and below, three of the temporaneous or colt's, and one permanent or horse tooth; at eighteen months the cavity in the nippers is filled up, and there are five grinders, two of the horse, and three temporaneous; at two years the first of the colt's molar teeth in each jaw, above and below, are displaced; at two years and a half or three years, the front nippers fall, and give place to the permanent ones; at three and a half, the middle nippers are likewise removed, at which period the second milk molar falls; at four years the horse is found with six molar



teeth, five of his new set, and one of his last; at four and a half the corner nippers of the colt fall, and give place to the permanent set (as seen in the engraving), and the last temporaneous grinder disappears. At five years old, when the teeth have been fully developed, the horse possesses six teeth in the front of each jaw, called incisors; a short distance from each end of the row of incisors, and in each jaw, there is a solitary canine tooth; these canine teeth are technically called *tushes*. At a greater distance inward, in each jaw, and on each side, there are six grinders. At five and a half years old, the nippers are marked by a natural cavity found in the substance between the outer and inner walls, and it is the presence or absence of these darkish marks that certifies the age of the animal. When the horse reaches six years, the marks in the two front nippers of the nether jaw are filled up, and the *tushes* are blunted. At seven years, the two nippers next the middle ones are also filled up; at eight, the two outer ones are filled up also, and the *tushes* are round and shortened. The lower nipper teeth are now all smooth; the marks are gone; but in the teeth of the upper jaw the marks remain for a year or

two longer. Although the mark of the horse's teeth furnishes the ordinary criterion of his age, yet this is sometimes apt to deceive, owing to a disgraceful practice which prevails among dishonest dealers, of making an artificial mark on the horse's teeth to resemble the natural one; by which inexperienced persons are apt to be misled. But no art can restore the *tushes* to their form and height, or re-furnish their internal grooves. The best judges, therefore, thrust one of their fingers into the horse's mouth, contenting themselves with merely feeling the *tush*. To less experienced judges other appearances present themselves as aids. Horses, when aged, usually become hollow above the eyes, the hoofs appear rugged, the under lip falls, and if grey be the colour of the horse, it becomes white. The appearance of a horse will be influenced by the treatment which he has received, and the work he has performed; it is not uncommon to find a horse at six years old feeble, debilitated, and exhibiting all the marks of old age. On the contrary, when the animal falls into other hands, at ten or twelve he has all the vigour of youth, and his teeth are the only parts that present an indication of age; it is therefore more useful to examine the general appearance of the animal, than to be guided absolutely by the marks on the teeth. In buying a horse, one of the chief requisites to be attended to is, the degree of nervous energy which the animal possesses; and it is the union of this energy with good conformation that completes the value of the horse. Its absence or presence, however, is not likely to be discovered without a trial; and, to avoid disappointment in this respect, it is absolutely necessary that a trial should be obtained previous to purchase. The horse should be set to the work which he is designed to perform; and if he be intended for the saddle, or for single harness, he should have no companion on his trial, for many horses work well in company, who are sluggish and slow when alone. Some horses have an awkward and unpleasant way of going, or are difficult to manage, or have some vice, which is only displayed when at work. In short, defects too numerous to mention may exist, which render a trial, previous to the conclusion of the bargain, an essential proceeding. But if that cannot be obtained, some sort of conclusion regarding the animal's spirit may be arrived at by his general appearance. The manner in which he carries his head, his attention to surrounding objects, his gait, and the lively motion of his ears, may all or each be looked to as indicative of "bottom," or willingness to work. It is only, however, in a private stable or in that of a respectable dealer, that these criteria can be depended upon; for, in a market-place, the animal is too much excited by the cracking of whips, and the too frequent application of them, to be judged of as regards his temper. Neither must the buyer be thrown off his guard by the animation which horses display at an auction, or on coming out of the stable of a petty dealer; for it is a fact, which cannot be too well made known, that there are

many unprincipled dealers, who make it their business, before showing a horse, "to put some life in him"—that is, they torture him with the lash, till, between pain and fear, the poor animal is so much excited as to bound from side to side with the utmost agility, at the least sound or movement of the bystanders. Minute attention should be bestowed upon the fore-legs and feet; these in fact, are the great trying points. If the feet be not round and full, so as to stand firmly and flatly on the ground, and if tender or thin in the hoofs, the animal is not to be trusted for saddle-work. Weakness in the fetlock joint will, also, cause a horse to stumble and come down, and is therefore an equally serious defect. Horses are sold with or without warranty at sales held at repositories; the terms of warranty are generally announced in a public manner; but when the sale is private, no warranty is binding which is not expressed in writing in the receipt.

HORSE, DISEASES OF.—The labour to which a horse is doomed, accompanied by his artificial state of living, exposes him to a number of formidable diseases. *Glanders* is the most destructive of all the maladies to which the horse is exposed; it is the consequence of breathing the air of foul and vitiated stables; and, in every stage of it, is most contagious. The disease takes the form of an irritation of the delicate membranes of the nostrils, accompanied by an offensive discharge of gluey matter from the nose, an enlargement and induration of the glands beneath and within the lower jaw, on one or on both sides, and small circular ulcers covering the cartilage of the nose. These are the general symptoms, but they vary greatly. Sometimes the discharge will be so slight as scarcely to be perceived, and be known only by its adhesiveness; and the glands will not be in the least degree enlarged; at others a very small enlarged gland may be found, adhering to the jaw, and may be stationary month after month, without any apparent discharge from the nose. The contagiousness of glanders renders it a disease to be particularly dreaded, for if a glandered horse be introduced into the stable, or work in the team, the greater part of the stud will, sooner or later, be lost. It should be known, also, that glanders may be communicated to human beings; and there are cases on record of persons having met with their death through inadvertently applying to their own faces a handkerchief or sponge which had been used for a glandered horse. Although every variety of remedy has been devised for this disease, it may, notwithstanding, be said to be almost incurable. Under these circumstances, the chief care is the prevention of the malady, which may generally be attained by proper stable management. Cleanliness and ventilation, therefore, are highly essential, and the atmosphere should not be too heated. Glanders may be produced by anything that injures, or for a length of time acts upon and weakens the vital energy of the nasal membrane. They have been known to follow a fracture of the bones of the nose. They

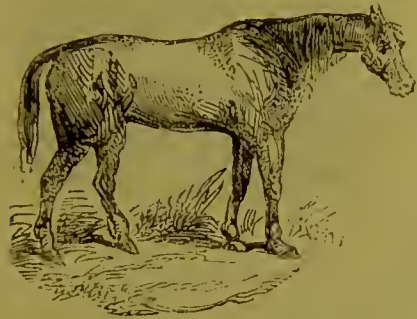
have been the consequence of violent catarrh, and particularly when the discharge from the nostrils is long continued. They have been produced by the injection of stimulating and acid substances up the nostril; and everything that weakens the constitution generally will lead to glanders. To protect other horses from contagion, the mangers, racks, and partitions of the stable, should be first well scraped, next scoured with soap and water, and thoroughly washed with a solution of chloride of lime (a pint of the chloride to a pailful of water). The walls should then be lime-washed, the head-gear burned, the clothing baked and washed, the pails newly painted, and the iron-work exposed to a red heat. These precautions taken, all danger will cease. *Farcy* is intimately connected with glanders: they will run into each other, or their symptoms will mingle together, and before either arrives at its fatal termination, its associate will almost invariably appear. The symptoms usually show themselves in what is termed a button or bud, which is, in fact, a species of indolent boil. In some cases, however, the horse will droop for many days before the appearance of the buttons or farcy buds; his appetite will be impaired; his coat will get out of order; he will lose flesh. The poison is evidently at work, but has not gained sufficient power to cause the abscesses to swell. The progress of the disease is then suspended, and possibly for many months the horse will appear to be restored to health; but suddenly the farcy assumes a virulent appearance, and hurries him off. The increase of the buds marks the progress of the disease. The ulcers spread around, and are cured with considerable difficulty. Larger tumours appear in the groin, and between the fore-leg, and ulcerate and spread: the hollows and burrowings run deep in every direction; glanders speedily appear, and death ensues. Few things are more dissimilar, or more perplexing, than the different forms which farcy assumes. One of the legs, and particularly one of the hind legs, will suddenly swell to an enormous size. At other times, the head will be subject to this enlargement; the muzzle will particularly swell, and a fetid discharge will issue from the nose. Sometimes the horse will gradually lose flesh and strength; he will be hide-bound; mangy eruptions will appear in different parts; the legs will swell; cracks will appear at the heels, and the inexperienced person may conceive it to be a mere want of condition, combined with grease. Farcy, like glanders, springs from infection, or from bad stable management. It is produced by all the causes which give rise to glanders, but with this difference, that it is more frequently generated, and sometimes strangely prevalent in particular districts. The treatment of farcy varies with the form it assumes. In the button, or bad farcy, a mild dose of physic should be first administered. The buds should then be carefully examined, and if any of them have broken, the budding iron, of a dull red heat, should be applied to them; or if matter should be felt in them, showing that they

are disposed to break, they should be penetrated with the iron. These wounds should be daily inspected; and if, when the slough of the cautery comes off, they look pale, foul, and spongy, and discharge a thin matter, they should be frequently washed with a lotion composed of a drachm of corrosive sublimate, dissolved in an ounce of rectified spirit. When the wounds begin to look red, and the bottom of them are even and firm, and they discharge a thick white or yellow matter, the friars' balsam will speedily heal them. As, however, the constitution is now tainted, local applications will not be sufficient, and the disease must be attacked by internal medicines. So soon as the physic has ceased to operate, the corrosive sublimate will be the best alternative, and may be given in doses of ten grains, gradually increased to a scruple, with two drachms of gentian and one of ginger, and repeated morning and night until the ulcers disappear; unless the horse is violently purged, or the mouth becomes sore, in which case a drachm of blue vitriol may be substituted for the corrosive sublimate. During this treatment the horse should be placed in a large box, with a free circulation of air, and green meat or earrots, the latter more particularly, should be given him, with a fair allowance of corn. If he could be turned out during the day, it would be advantageous; but at all events, he must be daily exercised. *Broken-windedness* is a distressing complaint, to which many horses are subject. When the breathing of a horse is rapid and laborious, it is said to be *thick-winded*; and when it breathes irregularly, the inspiration taking one effort, and the expiration two, it is called *broken-winded*. Inflammation of the lungs from cold, is the cause of thick-windedness, the condition of these organs preventing the full action of the air-tubes. This complaint, if not removed, will most likely terminate in the broken-winded condition. But broken-windedness will take place without the premoultory symptoms. The main cause of broken-windedness is sharp work after over-feeding—causing the animal to run while the stomach is full. It is a disease almost invariably the result of sheer carelessness on the part of the persons whose duty it is to superintend the feeding of the horse. Broken-windedness depends as much upon the cramped state of the lungs, from the pressure of an over-gorged stomach, in the ordinary state of the animal, as from the effects of over-exertion. A horse, for instance, frequently becomes broken-winded in a straw-yard, for there is but little nutriment in the provender found there; so that the animal, to obtain enough for the support of life, is compelled to keep the stomach constantly full, and pressing on the lungs. The perfect cure of broken-windedness is held to be an impossibility; yet much may be done to relieve it. The food of the animal should consist of a great deal of nourishment compressed into a small compass; the quantity of oats should be increased, and of hay proportionately diminished; the bowels should be gently relaxed by the frequent use of

enemas; the water should be given sparingly through the day, although at night the thirst of the animal should be fully satisfied; and, above all, exercise should never be taken when the stomach is full. *Inflammation of the brain*, produced by over-exertion, or by any of the causes of general fever, and characterized by the wildest delirium, must be submitted to the most profuse blood-letting, active purgation, and blistering of the head, *Tetanus*, or *locked-jaw*, is a constant spasm of all the voluntary muscles, and particularly those of the neck, the spine, and the head. Bleeding, physicking, blistering the course of the spine, and the administration of opium in very large doses, will alone give any chance of cure. *Palsy* is the suspension of nervous power. It is usually confined to the hinder limbs, and sometimes to one limb only. Here bleeding and physicking, and antimonial medicines, and blistering of the spine, are the most rational applications. *Rabies*, or madness, is evidently a disease of the nervous system, and, once being developed, is altogether without cure. The utter destruction of the bitten part with lunar caustic, soon after the infliction of the wound, will, however, in the great majority of cases, prevent the development of the disease. *Pleurisy*, or inflammation of the serous coverings of the lungs, and the lining of the cavity of the chest, is generally connected with inflammation of the substance of the lungs; but it sometimes exists independently of any state of the lungs. Active purgatives may be pursued, and copious bleedings and sedatives had recourse to. *The Curb* is a derangement of the hock-joint, which arises from over-exertion of the ligaments, and takes the form of an enlargement a few inches below the joint of the hock. *Bog-spavin* is a defect of a somewhat similar character, but of a more serious nature. This also takes place from over-exertion, and is an inflammation of the vesicles which contain the lubricating material for the nourishment of the joint. This disease is almost incurable, and the afflicted animal is in general only fit for ordinary and moderate work for the remaining term of his life. *Bone-spavin* is a still more formidable disease. It is an affection of the bone of the hock-joint, caused by violent action, or by any kind of shoeing which throws an undue strain on certain ligaments, and deranges the action of the bones. A bony deposit takes place, the joint is stiffened, and the consequence is a lameness or stiff motion of the hind legs. Blistering, as a counter-irritant, and rest, are the principal remedies prescribed for this complaint; but the best remedy of all is never to overload the horse, or to put him to any violent exertion. *Warts* may be cut off with the scissors, and the roots touched with lunar caustic. *Inflammation of the hare* may be abated by the employment of cooling lotions; but that useful defence of the eye should never, if possible, be removed. Common *Ophthalmia* will yield as readily to cooling applications as inflammation of the same organ in any other animal. *Canker in the mouth*, generally resulting from the pressure and bad usage of

a sharp bit, and small ulcers produced by rusty bits, should be treated with a little cooling medicuine, and to the ulcers themselves, tincture of myrrh, diluted with an equal quantity of water, or an ounce of alum dissolved in twenty times the weight of water, may be applied with advantage.

The horse is frequently subject to that morbid state which is characterized by no specific disease, but which is generally known as being "out of condition;" the animal assumes the jaded and drooping appearance seen in the accompanying engraving. The symptoms which characterize



this derangement are as follows:—The spirits of the horse are below par; a little exercise tires him, and the flesh becomes loose and flabby. The eyes are mostly dull, and, when not moist, they present a little inspissated crust at the anterior angle. The insides of the eyelids, and of the nostrils also, are often tinged with a yellow hue. The heat of the body is irregular; at one time the legs, ears, and muzzle will be cold, and at another a feverish heat and dryness may pervade the whole frame. The appetite for water is often increased, while that for food is frequently irregular and fickle, and what the horse does take appears to afford him but little nutriment. The hair ceases to shine, and becomes more or less ruffled; sometimes it falls off in patches; or lumps break out in different parts of the body. The legs of a horse in this state are very apt to swell, and not unfrequently cracks either accompany or follow the tumefaction. Sometimes, also, there will be a short dry cough. The accidental causes of morbid condition are various, and the remedial treatment must be so likewise. Injudicious feeding, as to quantity or quality, is very likely to produce it. A sudden remove from a generous to a poor diet is calculated to cause the derangement; for in such case the chyle, or nutritious pabulum, whence all the vital organs are recruited, and all the vital energies derive their vigour, cannot be separated in sufficient quantities. The blood itself thereby becomes deteriorated; universal absorption takes place of the softer parts, which produces a decrease of bulk; while a laxity of fibre in the remaining portions is productive of languor and debility. The liquid aliments should likewise be attended to in a consideration of the bad condition of

horses. Too much and too little water are both injurious: hard waters seldom agree well; mineral waters are unfavourable in most cases; and a continued use of brackish water, found near sea-bathing places, is always hurtful to such horses as have not been accustomed to it. Badly ventilated stables are often the cause of ill-condition, and cold ones equally so. An inordinate quantity of work, particularly if continued unremittingly for several days, and without previous preparation, will often produce a very obstinate morbid condition. In these cases the digestive organs themselves, having suffered equal injury with the rest of the frame, become unable to reinstate themselves; much less, therefore, can they be expected to be equal to the task of remedying the injuries of the whole mass quickly. Hence, therefore, these particular instances of morbid condition prove obstinate, and require much time and attention to remove. Such cases are very likely to occur in young unseasoned horses. In all cases, however, a good restorative plan consists in placing the horse in a loose box, with a malt mash at night, with carrots and speared corn in winter, with tares in summer, judiciously administering a mineral tonic at the same time.

The physicking of horses, in accordance with the various changes in their modes of feeding and living, or the ever-changing condition of their bodies, is a matter of great importance. When a horse comes from grass to hard meat, or from the cool open air to a heated stable, a dose of physic, or even two doses, may be useful to counteract the tendency to inflammation, which must be the necessary consequence of so sudden and great a change. To a horse that is becoming too fat, or that is out of condition from inactivity of the digestive organs, a dose of physic is often most serviceable. The practice of physicking all horses, as a matter of course, at spring and autumn is objectionable, and should certainly be guided by the condition of the animal. A horse should be carefully prepared for the action of physic. Two or three bran-mashes given on the same, or preceding day, are far from sufficient, when a horse is about to be physicked, whether to promote his condition or in obedience to custom. On the day upon which the physic is given, the horse should have walking exercise, or may be gently trotted for a quarter of an hour, twice during the day; but after the physic commences operating, he should not be removed from his stall. A little hay may be put into the rack; as much mash may be given as the horse will eat, and as much water, with the coldness of it taken off, as he will drink. If, however, he obstinately refuses to drink warm water, it is better that he should have it cold, than to continue without taking any fluid; but he should not be suffered to take more than a quart at a time, with an interval of least an hour between each portion. When the purging has ceased, a mash should be given once or twice every day, until the next dose is taken, between which and the setting of the first there should be an inter-

val of a week. The horse should be allowed to recover from the languor and debility occasioned by the first dose, before he is harassed by a second. Aloes form the surest and safest purgative for a horse. The dose for a horse, properly prepared, should be from five to seven drachms. The only other purgative upon which dependence can be placed is the croton. The farina or meal of the nut is used; but from its acrimony it should be given in the form of a ball, with linseed meal. The dose varies from a scruple to half a drachm. Linseed oil is an uncertain but safe purgative, in doses from a pound to a pound and a half. Olive oil is more uncertain, but safe; and castor oil is both uncertain and unsafe. Epsom salts are inefficacious, except in immense doses of a pound and a half, and then not always safe. Some little art and address are required in *administering physic* to horses: when a ball is to be given, back the horse in his stall; then, if necessary, the operator should raise himself on a stool or bucket, the tongue



of the horse should then be drawn a little way gently out of the mouth, so as to prevent its rising to resist the passage of the hand; but the tongue should not be laid hold of alone, or the struggles of the horse may injure it; on the contrary, it should only be held firmly by the fingers of the left hand against the jaw. The ball being previously oiled, must now be taken between the tips of the fingers of the right hand, lengthwise, when the hand, being squeezed into as small a space as possible, should be passed up the mouth close to the roof, by which injury to the teeth will be avoided; having placed the ball on the roof of the tongue, the hand may be withdrawn, and the tongue may be liberated as soon as the ball is seen to pass down the throat. The head, during the whole process, should be but moderately elevated, when held too high it is apt to cause choking. An easy method of administering liquid medicine is as follows: Sling a loop of rope across the prongs of a stable fork, introduce this loop into the

mouth, and by the aid of the fork handle separate the upper from the lower jaw. While the mouth is thus open, another



person, properly elevated, should place the horn or bottle, containing the fluid, into the horse's mouth, and, carrying it over to the root of the tongue, pour out the contents, when, still keeping the head well up, but letting the tongue loose, the drink will be swallowed.

HORSE, MANAGEMENT OF.—The health, vigour, and lasting powers of a horse, necessarily depend upon the amount of care and attention that is bestowed upon him. In treating of this important subject, therefore, it will be as well to take each of the leading features of management into consideration, and to give definite and precise rules respecting them. *Bedding* is an important duty, and cannot be too scrupulously attended to. The best bed is made of wheat-straw, but when that is dear or cannot be obtained, the straw of oats may be substituted. The more even and the less rumpled the litter, the better. The bed should be made level, or sloping slightly from the sides and head towards the centre, and be completely free from hard lumps. All ought to be smooth, clean, and soft, and the depth of the litter about seven or eight inches. Every morning the soiled litter should be taken away to the dung-yard, and the clean portion separated and placed at the head of the stall, ready to be employed again at night. *Cleaning the stable* should be performed every morning. The floor should be thoroughly brushed and swept, and all refuse and litter removed. *Grooming and dressing* are important considerations, inasmuch as the skin of the horse is liable to become clogged with a scurf of dried perspiration, along with particles of dust and mud, which collect and lodge among the hairs, and which, as a matter of course, if suffered to remain, materially interfere with the animal's health and vigour. As a general rule, a horse should be groomed every morning, before he leaves the stable to accomplish his daily labour. The grooming is commenced

while the animal is in his stall; the restraining rein is lengthened, to allow of his standing a little back into the gangway. If restive, his head must be tied up. All refuse having been previously removed, a little of



his bedding may be drawn out, for his hind feet to stand upon. The currycomb must then be used vigorously, the coat finished off by brushing, and the mane, tail, and forelock combed, so as to make all the hairs lie straight. The legs, especially if they be white, will require an occasional washing with warm soap and water, and then to be dried with a wisp of hay. The dressing of a horse after work is as necessary as the morning grooming. When a horse is brought into the stable in a state of perspiration, it should not be allowed to settle into a state of rest all at once, but be walked gently about till it becomes moderately cool. This allows the excitement of the blood-vessels and muscles to be allayed gradually, and prevents any sudden stoppage of the pores of the skin. Wiping may be resorted to, in order to assist the drying and cooling. The horse's legs and feet should then be washed with water and a brush or sponge, any spots of mud on his body removed, and the whole thoroughly dried with a fresh clean wisp. When the horse has been cleaned and dried, the cloth may be thrown over him, and he may be led to his stall. The cloth used in summer should be lighter than that employed in winter. The loins especially should be protected from cold, for in this part horses are peculiarly sensitive. Trimming should be performed with discretion and moderation; it should be borne in mind that every hair upon the horse's body is designed to fulfil some use, and their removal to any considerable extent is calculated to prove detrimental to the health of the animal. *The care of the legs and feet* forms a most important branch in the management of a horse. The legs must be kept perfectly dry and clean. Dirt suffered to form a lodgment, or wet allowed to remain upon the legs in cold weather, will fret the skin, and cause cracked heels, and many other ailments. If any disposition to swellings, cracks, &c., make their appearance on

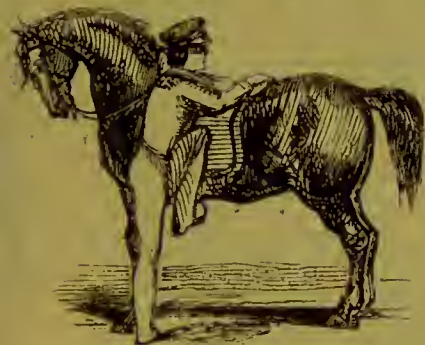
the legs, particularly in winter, moderate bandaging will, in general, contribute to remove the evil. It forms a part of the constant attention to the horse to see that the feet be well cleansed beneath the shoe from all stones and gravel, at every return from abroad. This must be invariably done when the horse has been stabled for the night. Take care to observe at the same time the general condition of the feet. The shoes must be examined, that their ends do not press into the crust, that the nails be fast, and that the clinches do not rise to cut the foot. In these cases, instant application must be made to the farrier. Horses ought by no means to remain in old shoes until the foot runs a risk of being worn. In the case of brittle hoofs, however, when it is obviously advantageous to shoe as seldom as possible, the shoes may be worn for a longer interval. Where there is a tendency to over-dryness of the hoof, as well as the undue action of moisture, it is advisable to anoint the horny part of the feet with an ointment made of tar, fish-oil, and beeswax, melted together in equal proportions; but this should not be done unless it is absolutely required. If well washed and kept clean, the feet will seldom require any such application. It is also prudent, when the hoofs are liable to harden and contract, to water the front part of the stall a little, and also occasionally or constantly, to hang around the hoofs an apparatus, made by doubling a circle of woollen cloth over a tape, which should be tied around the fetlocks loosely; the two segments of the cloth will then fold round the hoof, and correspond to it in shape. This may be dipped in water, and will be found admirably adapted to keep the feet cool and moist. It is considered beneficial, in general, to take off the shoes of a horse when necessitated to stand long in the stable, and doing no work, and to substitute tips: the growth of the crust, and the enlargement of the heel, being thereby promoted. The shoe of the horse must be of weight conformable to the powers and uses of the animal, also exactly suited to the curve of the hoof, flat, and of equal thickness. The operation of shoeing is most properly left to the farrier. As a general principle, care must be taken not to drive nails into any tender part, and the hoof should be as little broken as possible. *The exercise of horses* is essentially necessary to their health, as it counteracts the effects of the artificial life they are compelled to lead. The exercise should be daily, in the open air, and in the early part of the day; and when not exercised by work, the horse should be walked or trotted out on purpose. The horse that, with the usual stable-feeding, stands idle for three or four days, as is the case in many establishments, must suffer. He is disposed to fever, or to grease, or, most of all, to diseases of the foot; and if, after these three or four days of inactivity, he is ridden fast or far, inflammation of the lungs or of the feet is almost sure to follow. A gentleman's or tradesman's horse suffers a great deal more from idleness than he does from work. A stable-fed horse should have two

hours' exercise every day, if he is to be kept free from disease. Nothing of extraordinary, or even of ordinary labour, can be effected on the road or in the field without sufficient and regular exercise. The exercised horse will discharge his task, and sometimes a severe one, with ease and pleasure, while the idle and neglected animal will be fatigued ere half his task is accomplished; and if he be pushed a little too far, dangerous inflammation will ensue. Exercise should be somewhat proportioned to the age of the horse. A young horse requires more exercise than an old one; but it must not be violent, and the benefit derivable from it greatly depends upon the way in which it is given. To preserve the temper, and to promote health, it should be moderate, at least at the beginning and the termination. The rapid trot, or even the gallop, may be resorted to in the middle of the exercise, but, finally, the horse must be brought to cool. Much mischief is frequently done to horses, by the exercising of them being intrusted to boys; and, to avoid this, the owner of a horse should insist upon the performance taking place within sight, or in the neighbourhood of his residence. *The watering of a horse* is a very important, but frequently disregarded portion of his general management. The kind of water has not been sufficiently considered. Soft water is preferable to hard; the latter freshly drawn from a well, will frequently roughen the coat of the horse unaccustomed to it, or cause griping pains, or materially lessen the animal's power of exertion. The temperature of the water is also a matter of the greatest consequence. It will rarely harm if taken from the pond or the running stream; but its coldness, when recently drawn from the well, often proves injurious. Water, therefore, before it is given to the horse to drink, should be exposed for some hours previously, either in the stable or in a tank. There is often considerable prejudice against the horse being fairly supplied with water. It is supposed to chill him, to injure his wind, or to incapacitate him for hard work. It certainly would do so, if, immediately after drinking his fill, he were galloped hard, but not if he were suffered to quench his thirst more frequently when at rest in the stable. The horse that has free access to water will not drink so much in the course of the day as another who, to cool his parched mouth, swallows as fast as he can, and knows not where to stop. When on a journey, a horse may, with perfect safety, be more liberally supplied with water than he generally is. An hour before his work commences he should be permitted to drink a couple of quarts. He will perform his task much more effectually and pleasantly than with a parched mouth, and tormented by thirst. The task or the journey being accomplished, and the horse having breathed for a few minutes, another quart of water, or even two, will be gratefully refreshing to him, and will do him no harm. His corn may then be offered to him, which he will readily take; and before he has eaten the whole of it, two or three

quarts more of water may be given. Horses that are "touched in the wind" are invariably thirsty, and it is extreme cruelty to withhold water in such cases, on the plea that by exhalation they lose flesh. Such should, therefore, have a few gulps offered to them from time to time; but they should never be allowed to drink their fill on any one occasion, as the distension which would be occasioned would materially impede their respiration. *The feeding of the horse* is another important consideration. In England the chief articles of food are oats and hay, with inferior proportions of beans, pease, cut straw, and bran. The quantity, and also the nature of the food, will depend upon the habits of the animal, and the work to which he is put. If the work be hard, he must be fed to a considerable extent on oats, which are more nutritious than most other articles in use; but if the work be light, a lighter diet of hay, with perhaps only a small quantity of oats, will suffice. The stomach of the horse being small, he cannot eat much at a time; and it is always preferable to feed him often and at regular intervals, than to offer him large meals at irregular periods. There is another reason for offering small feeds: the horse loathes food which has been blown upon or previously touched, and will accordingly reject it, if offered a second time or allowed to stand beside him. For various reasons, therefore, it is better to give him a little only at a time, so as to leave none behind. If the animal be a poor feeder, or apt to waste his food, greater care still must be exercised in this respect. Oats ought to be sound, old, and dry; if otherwise, they must be rejected. In almost all cases it is preferable to have them bruised, for by this means they are more easily digested and nourishing than if left whole. A very general method of preparing horses' food is to mix oats with chaff composed of the cuttings of clover and meadow hay, and the straw of wheat, oats, or barley. This admixture tends to neutralize the scouring properties which characterize bruised oats alone. A machine is usually kept for cutting this food; but, at all events, the cuttings should be about half an inch in length. Hay, clover, and meadow hay should be sound and sweet flavoured, without any mustiness. The hay should, if possible, be a year old, and well preserved for use in an adjacent stack. Some horses are fond of pease; but they require to be given with caution, as they are apt to swell in the stomach. Almost all horses are remarkably fond of carrots, which, when administered in small quantities, do not purge the animal, and will improve the appearance of his coat. The proportionate daily quantities of food which various horses require are estimated as follows:—For agricultural and cart horses, eight pounds of oats and two of beans should be added to every twenty pounds of chaff, and thirty-four or thirty-six pounds of the mixture will be sufficient for horses of a moderate size, with fair or even hard work. In this estimate no hay is supposed to be given. When the horse is fed on the

two last articles, hay and oats, four feeds, or nine or ten pounds of oats per day, will be a fair allowance during winter, and in the case of moderate work; but in summer half the quantity, along with a proportion of green herbage, will suffice. The general allowance for a riding horse is twelve pounds of oats per day, given in three or four meals. A pony, having but moderate work, will be fed on six pounds of oats per day, with a fair proportion of hay. As an article of food for horses, recently introduced, sago may be referred to, which has the reputation of being highly nutritive, and may be employed, to a certain extent, to supersede oats, or to be mixed with them. It should be partially softened with water. Books: *Fouatt on the Horse*, 10s.; *Mills's Horsekeeping*, 1s.; *Stewart's Advice to Purchasers*, 2s. 6d.; *How to Buy a Horse*, 6s.; *Roper's Nature and Management*, 3s.; *Hicover's Treatise*, 5s.; *Cecil's Treatise*, 3s.; *Stewart's Stabling*, 6s. 6d.; *Doyle's Information*, 1s.; *Miles on the Horse's Foot*, 12s. 6d.

HORSEMANSHIP.—The art of riding with grace, safety, and fearlessness, on horseback; to attain which, it is necessary to observe certain rules, in order that the rider's manner of sitting and general management of the horse, may accord with his movements and disposition. In mounting, the rider



should approach the horse opposite the left shoulder, with his left breast near that shoulder, his whip being in his left hand. He then draws up the snaffle reins gently with his right hand, so as to equalize them, and get their centre; he then passes them between the second and third fingers of his left hand. He next places his left hand, and with the right, throws the reins to the off-side of the horse. He then takes the bridle with a tuft of the mane firmly in his left hand; with the right hand he holds the stirrup for the reception of his left foot; when that is safely introduced, his right hand is removed from the stirrup to the hinder part of the saddle, and grasping it firmly, he springs leisurely from the right foot, rises erect in the stirrup, brings his heels together for an instant, and then passes the right leg, well extended, over the rear of the horse; at the same time he lifts his hand to the pommel, and thus catches himself quickly. When first the reins

are taken in hand, they should not be grasped so tightly as to make the horse rear, run, or fall back; nor so loosely as to afford him an opportunity to set off before his rider is firmly seated. *The seat.* When mounted, the body should be kept easy but erect, inclining rather backwards than forwards; the weight chiefly resting upon the horse's haunches, with a moderate pressure of both legs to the sides. To preserve this position free from restraint, it is essential to regulate the length of the stirrups according to the stature of the rider. They should be exactly of that length in which, the rider sitting upon his horse, either still or in action, may be able to disengage his foot from them by a single motion, or to recover them with equal facility. Both stirrups should be of an equal length. The rider should not bear upon the stirrups, but only let the natural weight of his legs rest upon them. The position of the stirrup-iron should be just under the ball of the foot.

Position when in motion. The body must be kept easy and firm when in motion; the left elbow should lean gently against the body a little forward, and the hand in general should be about the same height as the elbow; the right arm must be placed in symmetry with the left, only let the right hand be a little more forward or backward, as occasion may require. The left hand, which holds the reins, must be kept clear of the body, about two inches and a half forward, and immediately above the pommel of the saddle; the nails should be turned towards the buttons of the waistcoat, and the wrist a little rounded with ease, the joint being kept perfectly pliable. *In dismounting,* the whip is to be returned into the left hand, the right hand taking hold of the rein above the left; the right foot quits the stirrup; the left hand slides forward on the rein; the right hand dropping the reins to the off side, takes a lock of the mane, brings it through the left hand, and twists it round the thumb; the fingers of the left hand close on it; the right hand is placed upon



the pommel, the body being kept erect. The body is supported with the right hand and the left foot; the right leg is, without touching the horse's hind quarters, or the

saddle, brought gently to the near side, with the heels close, care being taken not to bend the right knee, lest the spur should touch the horse; the right hand passes at the same time to the cantle, to preserve the balance; the body is gently lowered until the right toe touches the ground; resting on the right foot, the left stirrup is quitted, and the reins placed over the pommel of the saddle.

PACES AND MOTIONS OF THE HORSE.—
Walking. The rider should not suffer his horse to move until his seat is properly adjusted, and whip shifted; when, collecting his reins, and taking one in his right hand, he must close his legs, to induce the horse to move slowly forward. If he wish to accelerate the pace, the pressure of the knees must be increased. When the horse moves, the legs must resume their former position, the hands remain perfectly steady, and the body yields to the movement. In performing the walk, if the rider do not support the horse sufficiently, his head will be low, and his walk slovenly; if he support him too much, he will shorten the animal's step so that he cannot walk freely. If the rider do not animate him, he will not exert himself; if he animates him too much, he will trot. In turning, the horse should be moved gently round, and plenty of room should be given him. The bridle hand should be slightly raised, and then drawn to the side, the legs corresponding with the motion. Some caution is necessary in regard to the pressure of the legs, for if one be closer than the other, the horse will throw his haunches out or in, which will cause a shortening of the step in one of the hind legs, and consequently the stride will be diminished. When the turn is finished, the rider returns to his former position. *Trotting.* To effect the trot, the rider must apply, for an instant, both legs to the horse's sides; and at the same time raise the fore hand, by drawing the lower finger on each side rather upwards and towards the body, avoiding all jerks or sudden motions. During the trot, he must sit close to the saddle, preserving his seat by the balance of his body, and not by the pressure of his knees; he must neither rise nor stand in the stirrups; his body must incline slightly backwards; the whole figure must partake of, and accompany the movements of the horse; and the rider must keep the hands up in their proper position, steady and pliant, and preserving a just correspondence. If the action be too rapid, it must be checked by strengthening the hand. If the action be too slow, it may be quickened by easing the fingers, and giving more animation. To give more animation, and to encourage the horse to put his foot out freely, the rider must support his fore hand up, and his haunches under, by a touch of the fingers, the excitement of the tongue, the switch of the whip, or the application of the leg, varied so as not to lose their effect. If the action be not sufficiently united, that must also be corrected. To unite the horse, the reins must be collected, and the head raised. By bringing the haunches under him, he may

be pressed up to the bridle by the aid of the legs; care being taken that this is not done hastily or violently. The most certain sign that a horse trots well is, that when, in his trot, the rider presses him a little he offers to gallop. If the horse gallop when he ought not, the waist should be pushed forwards toward the pommel of the saddle, and a bend or hollow at the same time be made in the loins. *Galloping.* When a rider wishes to gallop from a walk or trot, he should first raise the bridle hand firmly, then slacken rein, and close the legs or give spur until the horse obeys; confining the horse to the speed desired, by drawing a firm rein and relaxing the pressure of the legs. The position of the horse in galloping always calls for a corresponding one from the rider; for instance, if the horse lead with the right leg, the rider's leg on that side will be more advanced than the left, and the inside of the thigh will be closer to the saddle; consequently the other thigh will be turned slightly outward, and the leg farther to the rear. The hips and the upper part of the body, are affected in the like manner. The rider while galloping, should, from time to time, glance his eye over the ground his horse is to pass over. It is immaterial which foot leads when galloping in a straight line, but it would be injurious to the horse were he always to lead with the same leg. To change the step (the horse galloping with the off fore foot in advance), the rider should draw the right rein, and close the left leg; and he should change from the near to the off fore foot on the same principle, but by inverse means. *In stopping a horse,* the rider should brace his arms to his body, holding both reins equally and firmly, drawing the fingers towards the body, closing for an instant both legs, to press the horse up to the bridle, and throwing the body back, with precisely such strength of all the muscles as is proportioned to the effect; all this being done at the same instant, and making but one motion. If



the rider do not close his legs, the horse may not bring his haunches under, the stop will lie on the shoulders, and its effect will be

destroyed. *Backing.* For a horse to back properly, he should be upon his haunches, have one of his hind legs always behind him, on which to rest and balance, and to impel or push him backwards; his head steady, and his legs well gathered. To aid the horse in this movement, the rider should incline the body slightly forward, hold the hand a little lower than usual, the reins equally and steadily, and yield and check instead of making a dead pull. To prevent the horse from swerving, the rider should press the legs gently to the rear of the girth. *Leaping.* Leaps are taken standing or flying; the first being most difficult to sit. The rider must, by a ready and fearless yielding of the bridle, leave the horse at liberty to extend himself, preserving his own equilibrium by leaning forward as the horse rises, and backwards as he alights. When the horse is brought to the fence, the body of the rider should be upright. The legs are to be applied to the sides of the horse with such firmness as to keep the rider down to the saddle, and in such a manner, namely, perpendicularly from the knee, that the action of the body shall not loosen or disturb them. The toes must be pulled up, to render the muscles firm, and to prevent the spur from approaching too near the horse; and, if necessary, they may be turned out a little, to strengthen the hold. The hand must be kept in the centre, and quite low; and the reins not too short, but just by the pressure of the fingers to feel the horse's mouth. The pressure of the legs and fingers will invite the horse to rise; and as he rises, the body comes forward and preserves its



perpendicular. The back must then be kept in and the head firm. The flying leap is distinguished from the standing leap by its being made from any pace without a previous halt; and although the action is quicker, it is much easier. The pace, however, at which the rider goes at a flying leap should always be moderate, in order that the horse may not rise too soon or too late. The seat in the flying leap is exactly the same as that in the standing leap; but, as the horse keeps a more horizontal position, it is easier. The rider, however, must not bring his body forward at the rising of the fore legs, because the spring from the hind legs immediately follows, and the body

might not only not get back in time, but, if the horse did not come fair, or refused to make his leap, and checked himself, the body, if forward, might cause the rider to be thrown. He should, therefore, keep his body upright;



take hold with his legs; keep his hand down; and, as the horse springs forward, his body is sure to take the corresponding action of leaning back, particularly if he, at the instant, slip his breech under him, and bring his waist forward with an exertion proportioned to the spring which the horse makes. He must also take care not to bring his body upright, nor slacken the hold with his legs till after the hind feet have come to the ground.

VICES OF THE HORSE.—Stumbling. By the rider pressing his legs to the horse's flanks, and keeping up his head, he may be made to go lightly on his fore legs; and the same should be done if he actually stumple, so as to afford him assistance. Hence it is evident that the bridle should be of such length in the hand that, in case of stumbling, the rider may be able to raise the horse's head by the strength of his arms and the weight of his body thrown backward. *Rearing.* The principal danger in rearing is the hazard of the horse falling backward. When, therefore, he rises straight up, the rider must throw his body forward, giving him all the bridle. The weight of the body will oblige him to come down; and the moment that his fore feet are near the ground, and before they touch it, both the spurs must be struck in as firmly and as quickly as possible. *Kicking.* Horses apt to kick, either when they go forward or stand still, must be kept much together, or held closely. When kicking is attempted, the hands, though fixed, must not pull at the horse, if he does not attempt to force the hand, and get his head; leave him at liberty to go forward. If, however, he attempt to get his head down, which would enable him to kick with such violence as to throw himself, he may have the head confined up; this will disarm him. When a horse kicks, the rider must incline the body backward. It is an effective punishment to twist him round a few times for this fault. If this be done in the direction of his weak or unprepared side, astonishment and confusion will deter him from further contention. In *plunging*, a horse gets his head down, cringes his tail between his quarters, sets his back up

puffs out his body, and plunges till he can hold his breath no longer. To cure this, the rider must hold on firmly by his legs, and take care that the horse, in getting his head down, does not pull him forward; at the same time he should incline his body backward, and hold firmly with his hands. *Shying* often proceeds from timidity—often from a want of confidence in the rider. When the horse does this, his head should be kept well up, and the leg should be pressed against the side towards which he turns. He should be caressed rather than chastised, and urged gently forwards. Sometimes it is advisable to slacken the rein, stop, and let him walk towards the object at which he shied. *Restiveness* may arise from many causes, and the first thing the rider should do is to ascertain, if possible, what the cause is. In many cases of sudden restiveness, a sharp application of the whip, a pressure of the legs, and a determination, as it were, of the body of the rider to go forward, produces the desired effect. But, if the horse refuse to move on, this must not be repeated, and the rider should cease to contend with him by these means; but, on the contrary, try to conquer, by assisting in all movements, until opposition ceases. If he backs, or turns round, the rider should encourage him by all the aids necessary to continue the movement. If he stands stock still, the rein should be slackened, and an air of indifference assumed, so that in a short time the horse's temper will be probably conquered, and he will move on quietly. In all cases, the seat must be kept firmly, and the rider must not suffer himself to get out of temper. Horses will occasionally attempt to *lie down* while the rider is on their back. This fault should be foreseen; and if a horse exhibit the least propensity to do so, he should be urged onward by one or two smart applications of the whip. If he attempt to *bolt or run away*, the hands must be depressed and slacker pulls given; but the rider must keep his seat firmly, and still try to guide the horse; for, sooner or later, the animal must of necessity come to a standstill for want of wind.

HORSERADISH, CULTURE OF.—This plant grows naturally in marshy places, and by the sides of ditches, in some parts of England; when cultivated it yields a profitable return. The horseradish affects a deep, loamy, rich soil, kept as much as possible in a moderate but regular degree of moisture. If the soil is poor, the roots never attain any considerable size; and the same effect is produced if grown in a shady place, or beneath the drip of trees. Should the ground require to be artificially enriched, leaf-mould, or other thoroughly decayed vegetable substance, should be dug in to the depth at which the sets are intended to be planted. Horseradish seldom perfects its seed, consequently it is propagated by sets, which are provided by cutting the main root and offsets into lengths of two inches. The tops or crowns of the roots form the best; those taken from the centre never becoming so soon fit for use, or of so fine a growth. Each set should have at least two eyes;

without one they refuse to vegetate at all. To obtain the necessary supply of crowns, any inferior piece of ground may be planted with sets, six inches apart and six deep; these will furnish from one to five tops each, and they may be collected for several successive years, with little more trouble than keeping them clear of weeds. Horseradish may be planted from the close of January until the same period in March; but the best times are October and February; the first season for dry soils, the latter for moist ones. The sets must be inserted in rows eighteen inches apart each way. The ground should be trenched between two and three feet deep, the cuttings being placed along the bottom of the trench, and the mould turned from the next one over them, or inserted to a similar depth by a long blunt-pointed dibble. When the planting is completed, the surface should be raked and levelled, and kept clear of weeds, until the plants are of such size as to render it unnecessary. The plants will be greatly benefited if the mould lies as lightly as possible over the sets, therefore treading on the beds should be carefully avoided. They speedily take root, and send up long straight shoots, which make their appearance in May or June. The only cultivation required is to keep them free from weeds, and, as the leaves decay in autumn, to have them carefully removed; the ground being also hoed and raked over at the same season, which may be repeated in the following spring, before they begin to vegetate. In the succeeding autumn they merely require to be hoed as before, and may be taken up as wanted. By having three beds set apart for this root, one will always be lying fallow and improving, of which period advantage should be taken to apply any requisite manure. If the plants, when of advanced growth, throw out suckers, these should be carefully removed during the summer as they appear. In September or October of the second year the roots may be taken up, and in November a sufficient quantity should be raised, to preserve in sand for winter supply. To take them up, a trench is dug along the outside row, down to the bottom of the upright roots, which, by some persons, when the bed is continued in one place, are cut off level to the original stool, and the earth from the next row is then turned over them to the requisite depth, and so in rotation to the end of the plantation. By this mode a bed will continue in perfection for five or six years, after which a fresh plantation is usually necessary.

HORSERADISH SAUCE.—In a little fish-stock stew an onion until it will pulp, add a teaspoonful of grated horseradish, and a teaspoonful of essence of anchovies. Beat all together over a fire, thicken it with a little butter, and finish with a spoonful of lemon-juice.

HORSERADISH VINEGAR.—Pour a quart of vinegar on three ounces of scraped horseradish, an ounce of minced shallot, and a drachm of cayenne; let it stand for a week, and it will then be fit for use.

HORSE TAMING.—The subjugation of the horse to the will of man has been recently made a subject of universal interest; and several professors of the art have appeared before the public, who undertake to render the most stubborn and vicious horse perfectly obedient and docile. The most successful operator in horse tanning is, without doubt, Mr. Rarcy, an American, who has unequivocally brought several notoriously vicious animals, which no one dared mount or approach, to a state of perfect obedience. The system adopted by Mr. Rarcy, has been the subject of much debate; but we have no doubt that his treatment is substantially as follows:—"The horse-caster is a wart, or excrescence, which grows on every horse's fore legs, and generally on the hind legs. It has a peculiar rank musty smell, and is easily pulled off. The ammoniacal effluvia of the horse seems peculiarly to concentrate in this part, and its very strong odour has a great attraction for all animals, especially canine, and the horse itself. The oil of rhodium possesses peculiar properties. All animals seem to cherish a fondness for it, and it exercises a kind of subduing influence over them. For the oil of cumin the horse has an instinctive passion—both are original natives of Arabia, and, when the horse scents the odour, he is instinctively drawn towards it. The directions given for taming horses are as follows:—Procure some horse-caster, and grate it fine. Also get some oil of rhodium, and oil of cumin, and keep the three separate in air-tight bottles. Rub a little oil of cumin upon your hand, and approach the horse in the field, on the windward side, so that he can smell the cumin. The horse will let you come up to him then without any trouble. Immediately rub your hand gently on the horse's nose, getting a little of the oil on it. You can lead him anywhere. Give him a little of the castor on a piece of loaf sugar or potato. Put eight drops of oil of rhodium into a lady's silver thimble. Take the thimble between the thumb and middle finger, stopping the mouth of the thimble, to prevent the oil from running out whilst you open the mouth of the horse. As soon as you have opened the horse's mouth, tip the thimble over upon his tongue, and he is your servant. He will follow you like a pet dog. He is now your pupil and your friend. You can teach him anything, only be kind to him, be gentle. Love him, and he will love you. Feed him before you do yourself. Shelter him well; groom him yourself, keep him clean, and at night always give him a good bed at least a foot deep. In the winter season, don't let your horse stand out a long time in the cold without shelter or covering: for the horse is a native of a warm climate, and in many respects his constitution is as tender as a man's. If you want to teach him to lie down, stand on his left side; have a couple of leather straps about six feet long; string up his left leg with one of them round his neck; strap the other end of it over his shoulders; hold it in your hand, and when you are ready, tell him to lie down, at the

same time gently, firmly, and steadily pulling on the strap, touching him lightly on the knee with a switch. The horse will immediately lie down. Do this a few times, and you can make him lie down without the strap."

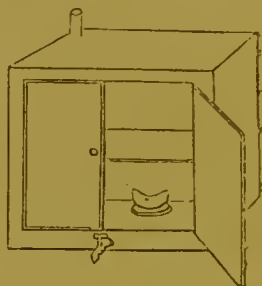
HOSPITAL.—A public institution for the relief of sickness and disease. These admirable institutions afford relief both in-door and out-door gratuitously. The patients are attended by the most eminent members of the medical profession, and nurses are provided to administer to every want. One of the most important functions of the hospital is, that it receives cases of accident or emergency instantly and freely, and in order to ensure this the more certainly, the doors are open day and night, and surgeons are in constant readiness to give immediate attention to the cases that need their assistance. Hospitals are established in almost every town of importance in England; and their rules and regulations are substantially as follows:—In-door patients are admitted by a recommendation of one of the governors on certain days in the week; every necessary is provided gratuitously; but articles coming under the head of comforts or luxuries may be brought in by the patients' friends under certain restrictions. Relatives and friends are admitted to see the patients on certain days, and at stated intervals, generally once or twice a week; but exceptions are made in cases of impending death or under peculiar circumstances. It is customary to keep the patient in the hospital until every means of cure have been tried; but when the disease obstinately resists every method of treatment, the authorities are compelled to discharge the patient as incurable, so as to make room for other patients. When a patient is placed in a hospital it is required of the relatives or friends to give a written undertaking that in case of death the body shall be removed and buried by them. Out-door patients are usually attended to without any recommendation; all that has to be done is for the patient to present himself at the door of the hospital within certain hours, when he will be attended to by a properly qualified person, and have given to him medicine and any other materials which the complaint render necessary. The list of the Metropolitan Hospitals is to be found in the *Post Office London Directory*; and the purposes of each hospital, together with the regulations by which it is governed, will be supplied by the porter at the gate or door of each establishment.

HOTBED.—A name given by gardeners to a heap of fresh stable litter in a state of fermentation, upon which a glazed box is placed for the cultivation of certain plants requiring heat and moisture in greater quantity than those agents exist in the external air. Formerly hotbeds were more exclusively used for various purposes in horticulture than they now are. This is owing to the perfection to which other means of producing and applying artificial heat have now attained; but still, for the growth of cucumbers and melons, for raising seeds of tender annuals, and other plants, either culinary or

ornamental, hotbeds continue to be advantageously employed, as they likewise are for the striking of cuttings. Hotbeds may be formed of various substances, such as fresh litter, tan, leaves, or a mixture of these with moist litter; in short, any substance capable of producing and retaining fermentation, and which will admit of being built up so as to support a frame with sashes. The substance, however, that is most generally used is fresh stable litter; the preparation which it requires, consists in its being thrown in a heap, and also watered, if it contain much dry litter; and as fermentation proceeds, it should be turned two or three times, and mixed thoroughly in the process. The situation in which hotbeds ought to be formed, should be dry, open to the south, and well sheltered in every other direction, either by walls backed by high and close growing trees, or by very close and lofty hedges. Such extensive shelter, though desirable, cannot always be obtained, but some mode should be employed to break the force of sweeping winds. The basis on which the bed is to be formed should be marked out from four to six inches each way beyond the dimensions of the frame intended to be placed upon it; and if faggots or layers of brushwood be laid as a foundation, it will admit heat completely under, when the bed requires the application of a *lining*, which is a quantity of fresh materials added to the outside, should a diminution of heat require a new supply. The bed is then built of successive layers of the prepared materials, each layer being beaten tolerably compact with the fork as it is laid out, to the height of four feet in front and four feet nine inches in the back; the sides and ends should be quite perpendicular. The top layer should be as free from litter as possible. When thus finished, the frame and lights are placed upon it, and so soon as the violence of the fermentation has diminished, mould is put in; and when the latter has acquired a proper temperature, the plants are introduced. Instead of mould, rotten tan or leaf-mould, or sand is spread over the surface of the bed, when pots containing seeds or cuttings are to be plunged. As soon as the heat of the bed begins to decline, a lining of fresh materials must be applied. This, however, must be composed of substances that have not undergone any previous fermentation, and may consist of fresh stable litter, merely shaken up as it is placed against the sides of the bed, or of grass mowings, or of leaves, or of a mixture of such substances. A bed formed of well-prepared materials, and raised to the height above mentioned, will be sufficient for any purpose for which a strong bottom heat is required; but a very mild bottom heat is frequently all that is wanted. In this case the bed is made lower and more compactly beaten or trodden. Substances that ferment violently are likewise excluded from its composition. It sometimes happens that, notwithstanding every precaution with regard to its formation, a hotbed will become too hot for plants or seeds that may have been placed close to it. In this case the only remedy is to remove the plants until the

hotbed has been re-made, with the addition of some materials, the fermentation of which is slower and less violent.

HOT CLOSET.—A receptacle in which the various dishes prepared for the table are kept hot until they are wanted. The ordinary closet consists merely of shelves of a size proportioned to the number of dishes, kept very warm in the inside by flues or steam. They are sometimes made of cast-iron, and placed in a recess over the kitchen oven or roaster, and heated by the smoke and heat as it comes from the oven. They may also be heated by steam, after it has served to heat boilers. The annexed engraving illustrates a portable hot closet, heated



by steam, made entirely of tin plate. The outer case consists of two thicknesses of tin plate, having the steam between: a pipe from the boiler conveys the steam to the apparatus, and the condensed water runs off by a pipe with a stop-cock at the bottom. A hot closet may also be made on the screen that stands before the kitchen range, by various modes. A screen with a closet within, being constructed on the principle illustrated, steam is conveyed by a pipe on the floor and introduced into the space between the closet and the outside casing, the condensed water passing off by another pipe. Sometimes, when more heat is required, steam is not only carried all round the hot closet, but even in the shelves, as shown in the accompanying figure; the shelves being of tin and double, with the space between about an inch and a half. An economical and excellent hot closet may be constructed from a common screen used when meat is roasting, and closing up the front or side next the fire, with sheet-iron blacked, placing a door at the back, through which the various articles may be placed in and taken out. As black iron absorbs the heat powerfully, the air inside not being able to escape when the doors are shut, becomes very hot. In some cases it may not be necessary to convert the whole of the screen into a closet, the upper half alone being found sufficient, and the lower part may be used as a plate warmer; two sets of doors will, however, be necessary.

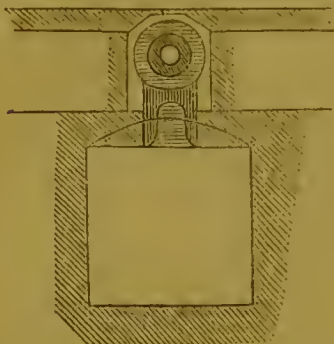
HOTEL.—All persons who have to travel are frequently compelled to make an hotel their temporary home; and under such circumstances it is important to ascertain which are the most economical and comfortable establishments. Supposing a person to be

ignorant of this essential knowledge, it would be as well before he set out upon his journey, to glean from some friend or acquaintance the name of the best hotels in each town, with their charges, &c.; and of these items he should make a memorandum in his pocket-book. Hotels present this anomalous feature, that whereas some of them charge very high, the viands are indifferent and the comfort small; while other houses, charging more moderately, give their customers excellent fare, and lodge them comfortably. When the intending traveller has obtained these particulars, he should write to the landlord of the hotel a day or two previously, so that arrangements may be made and he may take possession of his apartments, with the fire lighted, dinner prepared, and all conveniences at hand, instead of taking up his quarters without previous intimation, and at the very moment when he most needs rest and quiet, being irritated and annoyed by the hurry, and bustle, and confusion which his unexpected arrival has occasioned. As a matter of course, the cost of living at an hotel is very high; but by judicious management this may be considerably moderated. At many hotels a system has been introduced of charging so much per day or week, according to the style of living and the accommodation required; the obvious advantage of which arrangement is, that a person knows precisely how much he has to pay. Again, it must be borne in mind that occupying a private room, and having a dinner expressly served up daily, is charged for at a much dearer rate than if a person contents himself with sitting in the coffee-room, and dining at the *table d'hôte*, both of which he may do with an equal or perhaps greater degree of comfort, provided he is alone, and has no particular or private business to transact. The commercial room of an hotel is generally considered the pleasantest, because there is always sure to be company in it, and there exists a species of freemasonry and good-fellowship amongst the frequenters, which helps to pass away the evening pleasantly. It should be known, however, that if a person is not travelling on business, he cannot enter this room without being considered an intruder. The matter of fees to servants is one of those unpleasant concomitants of hotels which every traveller finds distasteful, for not only is the tax an imposition in itself, but the uncertainty as to how much ought to be given, or in other words what the servants will be satisfied with, renders the exaction still more repugnant. At some establishments a certain charge is added to the bill for these fees, which at once settles the difficulty. When a person makes a protracted stay at an hotel he should not allow the bill to run on for too long an interval, but desire it to be furnished, say once a week, and he will then be able to correct any inaccuracies which it may contain. When staying at an hotel a person should take the precaution to lock up all articles of value in his trunk or portmanteau; and in order to render the security greater, the lock should be a patent one of the best description.

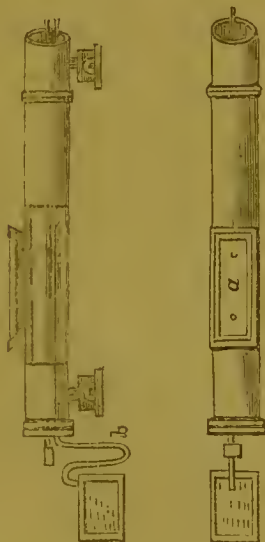
When leaving an hotel, if any instructions have to be given, such as the forwarding of letters, &c., the proprietor of the establishment himself should be spoken to upon the subject.

HOTHOUSE.—In gardening, a building formed upon a similar plan, and for the same purpose, as a green-house; but with a hot-bed of tan in its centre, and warmed to a considerably greater extent of heat, being seldom less than 70° of Fahrenheit, and equally maintained. Many changes have of late years taken place in these important adjuncts to scientific gardening. Their form and general structure have been much varied, and the spherical shape largely introduced. A considerable improvement in the mode of glazing also consists in making the upper and lower edges of the panes, segments of a circle, instead of being rectilinear or horizontal; the upper edge being made concave, the lower, convex. The advantages of this circular form must be evident. The rain which falls or the moisture which collects on the exterior of the glass, gravitates to the centre of the pane, and runs down in a continued line, instead of passing along to the side of the bars, and being partly detained by the capillary attraction of the two surfaces, at the overlapping of the panes. This narrowness of the top, again, prevents breakage from the lodging of moisture, and the sudden expansion produced by freezing during the variable weather of winter. When these circular panes are cut from whole sheets of glass, the expense is scarcely greater than for oblong squares. It is proper that the glass should be flat or equal; and the kind known by the name of 'patent crown glass' is to be preferred. The tops of the panes must be puttied; and on doing this, a small central opening should be left in the putty by inserting a slip of wood at first, and withdrawing it when the pane is pressed down to its bearing; by this little aperture the condensed vapour generated within, escapes without dropping on the plants beneath. The most important improvement in the heating of hot-houses, is the introduction of steam, by which medium a uniformly high temperature can be maintained for a length of time with great ease and certainty. A steam apparatus may be appended to an ordinary hot-house, without incurring any material expense, or any considerable alteration in structure; thus, a boiler may be erected over the ordinary furnace, the smoke of which passes through the flue as formerly. Heating by steam may also be carried out, by heating cisterns of water and also beds of stones. Steam may be applied to heat the atmosphere of a hot-house, making it the agent for conveying the heat to pipes of water, and carrying the small steam-pipes through the larger, containing the water. This method is excellently adapted to large places, more especially when the hot-houses are detached from each other. The following illustrations and description will serve to explain this operation. The water-pipes are eight inches in diameter, and about twenty-eight

feet long, presuming such to be the length of the house to be heated. The steam-pipe of one inch in diameter entering at the centre of one end, and proceeding in rather an inclined direction to the other, is then returned, still inclining, and passed out at the bottom of the bore, immediately under the place where it entered; it is then formed into a siphon, *b*, about three feet deep,



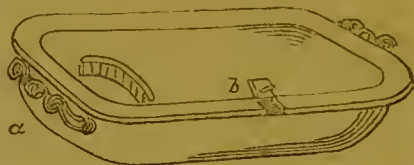
whence the condensed water is carried away. A smaller pipe is also connected with the top of the large one, to receive the increase of water by expansion when heated, which, as the large pipe cools, returns into it again. The annexed figure shows the



arrangement of the front pipe under the floor. The air being admitted from the air-chamber underneath, through an opening extending the whole length of the pipes, and passing through the upper chamber on each side of the pipes, is discharged through the grating into the house. The arrangement of the back pipes is similar. Shallow

cisterns are connected with the upper part of the pipes, about eighteen feet from each other, by means of hollow screws, shown at *a*, which admit the water to pass to and fro reciprocally. The capacity of the cistern is more than sufficient to receive the increased bulk of the water, which expands when heated, and returns again to the pipes as the water cools. Another advantage of applying this mode of heating is, that as no returning pipes are necessary, as in the common hot-water apparatus, the bulk of water is doubled, with the same extent of heating surface, and the retaining power of the apparatus is doubled accordingly. The cisterns are further serviceable for regulating the humidity of the house, which can be done with the greatest accuracy by attending to the covers.

HOT-WATER DISH.—In cold weather, joints of meat are apt soon to become cold when placed on an ordinary dish; and when there is much fat upon the joint, the gravy will present a clotted and unseemly appearance. The hot-water dish remedies these defects, being provided with a reservoir, *a*,



for hot water beneath the dish itself, the water being poured in at *b*. When the joint is large, and the number of persons to be helped many, this contrivance will be found of especial service.

HOUND.—See BEAGLE; BLOODHOUND; GREYHOUND; HARRIER, &c.

HOUSE AGENT.—A person employed in the letting and buying of houses, and in other negotiations relating to houses generally. Before entering into business with a person of this class, particular inquiries should be made as to his respectability, since there are numbers of disreputable persons who trade under this denomination simply with a view of entrapping the unwary. The terms upon which agents usually do business take the form of a percentage or commission on the amount involved. But previously to a transaction being entered into, the charges should be definitely understood, and embodied in a written memorandum. House agents will be found useful to a person who wishes to rent or buy a house, as any one of them in a good way of business, always has upon his books a large number of houses, from which, in all probability, one may be selected to suit the applicant. It is not customary for the person taking or buying a house through the medium of an agent to pay any charges. An exception to this rule may be made in extraordinary cases; and at all events, it is always better to understand whether any fee is expected or not.

HOUSE, CHOICE OF. — In making choice of a house there are several points upon which it is desirable to obtain information. First, take care that it is not damp. Dampness may arise from a variety of causes, but imperfect drainage, and a too close contact of the floors with the ground are the principal. When a house is damp in any part, no matter from what cause, it is advisable by all means to avoid it, for it may produce the most pernicious effects upon the health of your family. Second, see that the house has a free open exposure for fresh air, and is situated so as to catch the sun's rays. Third, ascertain if there be a plentiful supply of pure water. Fourth, learn whether the chimneys are in good order and do not smoke. There are other inquiries to be made, which, though not applying to the structure and convenience of the house, intimately concern the dwellers within it. Thus, convenience to the place of business of the master of the house, and the nearness of shops where articles necessary for the household may be purchased, are essential considerations; many persons have been tempted to take a house, in an evil hour, merely because it struck the eye as being pretty and pleasant, and it has afterwards been discovered that these charms have gradually worn off, as the inconveniences connected with it increased. The respectability of the neighbourhood is another important point, and this is especially so, when the house you propose taking is attached or semi-detached; in the latter case, nothing can well be more vexatious and annoying, than being linked to a neighbour in whose house there is considerable quarrelling, noise, and other disturbances. Be careful to calculate that the rent is not too high in proportion to your means; for, remember that the rent is a claim which must be paid with but little delay, and that the landlord has greater power over your property than any other creditor. Carefully note the state of repair in which the house is, and if anything strikes you as requiring to be done, insist upon its being done before you enter the house. Never content yourself with the promises of a landlord on this score, for when once he has secured you as a tenant, the chances are that the promised repairs will be attended to at his convenience, not yours. Hesitate to sign an agreement for a lengthened term, until you have well considered whether such a contract is in accordance with your pursuits, and agreeable to your family. And be particularly cautious never to sign an agreement without perfectly understanding what you are signing. In important cases it is better to leave this matter in the hands of a respectable solicitor: it being much wiser economy to incur a trifling outlay at the outset, than to incur expense and litigation hereafter. When buying a house, the foregoing hints apply with all the greater force; and in addition, it is necessary that a surveyor should be employed, in order that he may examine into, and report upon the condition of the structure. When once fairly in possession, the master of a house should exercise

his ingenuity in rendering it snug and comfortable; the task cannot be other than a pleasant one, and the result will amply repay the labour expended upon it. Endeavour to keep the house in repair by every reasonable means, but when once a defect is discovered, have it remedied as speedily as possible, promptitude in these matters sparing a great deal of discomfort and expense. — See **ASPECT; BEDROOM; DRAWING-ROOM; PARLOUR, &c.**

HOUSEHOLD MANAGEMENT. — See **CLEANLINESS; DOMESTIC ECONOMY; ECONOMY; HOME; HOUSEKEEPING, &c.**

HOUSEKEEPER. — The housekeeper of a first-rate establishment has the entire direction of the female servants. Her value and importance to her principals depends mainly upon her vigilant superintendence of each branch of female service, and on her constant investigation into the efficiency, steadiness, and general good conduct of each individual under her charge. It is her duty to see that the business of the house is regularly and properly performed; that everything is done in its right season, everything applied to its right use, and kept in its right place. The care of the furniture, of the household linen, and of all culinary and domestic utensils, devolves upon the housekeeper. The charge of the store-room belongs to her, also whatever stores are purchased, it is her duty to receive, examine, and weigh them; noting down, either in the store-book or on tickets, the weights and number of the articles, and handing the account so taken, to the steward, to serve both as a check upon the tradespeople, and the consumption. With cooking, generally the housekeeper has little concern. Her care of the table is confined chiefly to pickling and preserving; and in preparing confectionery, making ice-creams, arranging the dessert, &c. These preparations are all performed in the still-room, and with the assistance of the still-room maid. The early duties of the day must be devoted, first, to seeing that her subordinates are properly at work; and then to following her own still-room employments, &c. When all household business is ended, she has to set the maids to their sewing, placing in their hands the household linen which requires to be made or to be repaired. Her evenings should be occupied in preparation for the ensuing day. Lump sugar has to be broken, raisins stoned, currants washed, spices pounded, oranges and lemons peeled, and the juice strained and bottled for use. She has also to keep books in which the expenditure of the day is noted down, and to make memoranda of such articles as are required in her store-room. Half-yearly, or at convenient periods, she should compare the inventories given to her on entering the family, with the articles enumerated; and in making out new lists, she should carefully record the deficiencies which time or other causes have produced, and also enter a list of the articles which have been added to replenish such deficiencies. The housekeeper at the head of a smaller establishment, in which there is neither house-

steward nor man-cook, has many other duties to perform besides those enumerated above; marketing, in such a case, falls on her, and the higher branches of cooking, together with the arrangement of the table.

HOUSEKEEPING.—It is incumbent upon every prudent housewife to keep a regular and continuous account of her income and expenditure, this being generally the most essential in the routine of domestic duties. When properly set about, and methodically managed, there is little or no trouble in keeping the household accounts. There are a variety of methods, but the following simple plan will be found the readiest. Procure a small slate-book, constitute it your journal, and keep it ready at hand, so that you may enter with the pencil every item of expenditure as it is disbursed; at the end of so many days or a week, these entries should be transferred to a ruled paper book, which is your ledger; one page of this is devoted to money received, and the opposite side to money laid out. By making the entries regularly, and comparing the totals of each side from time to time, you will be able to ascertain at any moment how money matters are progressing.

HOUSEMAID.—The duties appertaining to this service are divided between upper and under housemaids. The daily occupations of the upper housemaid commence, together with those of her assistant, in the rooms of which the use will be first required. The windows of these are to be opened in the first instance, weather permitting it; the curtains are then to be shaken, and hung up high enough above the carpet to remove them from the dust, which, in sweeping, will rise from it. The sofas, couches, and choice furniture must be covered with loose sheets of coarse calico or brown holland, and the rest of the room is to be prepared for the sweeping of the carpet by the removal of chairs, tables, &c., away from the sides and towards the centre of the room. The sweeping then should be begun from the upper end of the room, and proceeded with towards the fire-place, or lower end of the room, according as the pile of the carpet appears to be; for the sweeping must not go against, but with the pile. When the sweeping is done, the upper housemaid proceeds to remove the chimney ornaments, as well as others from cheffo- uiers, tables, &c., in order to dust the places in which they stand. Every part of the room is then carefully dusted, the curtains laid in folds, and the whole room placed in proper order. This done, it is her duty to take warm water, and anything else that may be necessary for toilette, into the dressing-room of her mistress. When these matters are settled she may sit down to her breakfast. *The under housemaid*, after removing the hearth-rugs, should proceed to clean the grates; for this purpose, she should put on a pair of leather gloves, so as to preserve her hands, and to prevent other things from being discoloured. The fires should then be lighted, if in winter; and the same duty should be performed in the dressing-room. After breakfast the house-

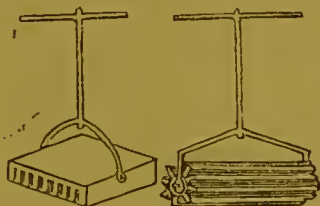
maids repair to such bed-rooms as are vacated, removing the bed-clothes, shaking up the beds, and then leaving them so, while the other duties of the bed-room are attended to. When these are performed, the bed should be made, and the bed-room swept, previously covering up the bed, dressing-table, wash-stand, &c., to preserve them from the dust. The under housemaids are usually required to assist the cook in preparing the dinner each day. The repairing of the household linen is an ordinary portion of the housemaids' duties, which usually fills up any leisure time they may have, until the period at which they must return to the bed-rooms and dressing-rooms, in order to replace everything that has been used during the dressing-time of the members of the family. Any leisure time between the last branch of their employment and the hour of going to bed, is usually allowed them for attending to the repairs of their own clothing. In some families the housemaids are allowed two or more evenings in the week for their own work. The daily duties of the housemaid usually end with the doing up of bed-rooms, and with the other preparations for the night. In establishments in which one housemaid only is kept, the whole business must be methodized according to the amount of work, and the movements of the family. In an establishment where regular habits prevail, she may probably have the privilege of going early to bed, so as to allow of her rising at six o'clock in the summer, and seven in the winter; and by economizing her time and methodizing her work, she will find no difficulty in accomplishing the duties which usually fall to servants in these cases.

HOUSE-STEWARD.—The house-steward is the representative of his employer in all matters of business connected with the house: he hires, manages, and directs every subordinate member of the establishment of men-servants, with the exception of the valet. He purchases every article consumed in the house, and it is necessary for him to know the articles and quantities that are wanted, and the best seasons for buying them. He must be ready in accounts, and keep a strict record of monies received and disbursed; and for his own satisfaction and his master's security, he should never pay any money away without having a receipt. The house-steward has a room appropriated to his use, in which he should make a point of remaining for certain periods during each day, so that all other members of the household may find him ready to answer their questions, or listen to their complaints. This done, he then proceeds to the various offices, to see that in each, the duties of the day are being properly performed. In some instances the house-steward has the general superintendence of the stables, and seeing into the fair and honest use of hay and corn; but this duty is usually performed by the coachman.

HOUSE-TAX.—This tax is imposed upon householders in lieu of the window-tax, and is as follows: for every inhabited house which, with the offices, yard, and garden


therewith occupied, is rented at £20 a year, and upwards; if used for the purposes of trade, and goods or wares are exposed in the shop or warehouse for sale, for every 20s. of such annual value, 6d.; if occupied by a person licensed to retail beer, spirits, wine, and other liquors, 6d.; if occupied as a farmhouse, 6d.; if occupied in any other manner, for every 20s. such annual value, 9d. *Exception*—Market gardens and nursery-grounds are not to be included in valuation of inhabited houses.

HUMMELLER.—An instrument for separating the awns of barley from the seed. A cheap method of hummelling barley, where a threshing-machine is in use, consists in having a second cover for the drum lined with tin, having small holes perforated in it in the manner of a grater, the rough side appearing externally. The grain being separated from the straw in the ordinary way, the grated cover is to be substituted for the common one, and the grain passed through a second time. Hand hummellers are of two kinds, one somewhat similar to a garden roller, the cylinder being formed of thin flat wrought iron bars, placed about two inches apart, and the edges to the surface; this rolled over the barley, takes off the awns. An instrument is also used




for this purpose, resembling a grated presser or chopper, about a foot square, barred across with tin plates; this is lifted up and down by the workman, and the awns are thus chopped off. The best machine, however, is one placed upon a wooden stand, with a hopper, into which the harley is thrown, whence it falls into a box in which a spindle is placed on an inclined position, having, when at a few inches apart, short knives, placed spirally, so as to form a sort of screw, which, when put in motion, has a tendency to draw the harley from the upper end of the box to the lower; during the operation the awns of the barley are effectually removed.

HUNGARY WATER.—To a pint of proof spirit of wine put an ounce of oil of rosemary, and two drachms of essence of ambergris; shake the bottle well several times, then let the cork remain out for twenty-four hours. After it has stood a month, during which time shake it daily, pour it into small bottles, and set by for use, securely corked.

 Spirit of wine (proof), 1 pint; oil of rosemary, 1 oz.; essence of ambergris, 2 drachms.

HUNTER'S BEEF.—Take three ounces of coarse sugar, three ounces of saltpetre, one ounce of nutmeg, half an ounce of allspice, and three handfuls of salt; mix them to a fine powder. Then procure a round of beef weighing twenty-four pounds, and after letting it hang for two or three days, rub the spices well into it, and continue to do so for a fortnight or three weeks. When to be dressed, dip it in cold water, to take off the loose spice. Bind it up tightly with tape, and put it into a pan with a teacupful of water at the bottom; sprinkle the top of the meat with shred suet; cover the pan with a coarse crust, and put brown paper over it. Let it hake for five hours, and when cold, take off the paste and remove the tape.

HUNTER'S PUDDING.—Mix one pound each of suet, flour, currants, and raisins, the latter stoned and slightly cut; the peel of half a lemon shred very fine, six Jamaica peppercorns, in fine powder, four eggs, a wineglassful of brandy, a teaspoonful of salt, and as little milk as will make it of a proper consistence; boil the mixture in a floured cloth for eight or nine hours; serve with sweet sauce.

 Suet, 1lb.; flour, 1lb.; currants, 1lb.; raisins, 1lb.; lemon-peel, $\frac{1}{2}$ of 1; Jamaica peppercorns, 6; eggs, 4; brandy, 1 wineglassful; salt, 1 teaspoonful; milk, sufficient.

HUNTING.—See FOX, HARE, STAG, &c.

HURDLE.—In husbandry, a light frame of wood or iron, somewhat in the form of the common gate, constructed for the purpose of forming a moveable fence for the confining of sheep and other animals. The accompanying figure represents a hurdle set as it should be, and the mode of setting them is this: two persons set down the hurdles in the line of the intended fence. The first hurdle is raised by its upper rail, and the end of its stakes are sunk a little into the ground, with a spade, to give them a firm hold. The second hurdle is let into



the ground in the same manner, both being held in that position by the assistant. One end of a stay, *f*, is then placed between the hurdles near the tops of their stakes, and the stay and hurdles are fastened together by the peg, *h*, passing through holes in both. Another peg, *i*, is passed through a lower part of the stakes. The hurdles are then inclined away from the fenced ground, until their upper rail stands three feet nine inches from the ground. A short stake, *e*, is driven into the ground, at a point where the stay, *f*, gives the hurdles the above inclination, and a peg fastens the stake and stay together, as seen at *g*. After the first two hurdles are thus set, the operation is easier for the next, as one hurdle is raised after

another, and fastened to the last, until the entire line is completed. A very common form of hurdle is shown in the annexed engraving. It is made of any sort of willow



or hard wood, such as oak-copse, ash-saplings, or underwood, such as hazel. It consists of two heads, six slots, two stay-slots, and an upright slot. The slots are mortised into the heads and nailed with flattened fine-drawn nails, which admit of being very firmly riveted, upon which the strength of the hurdle mainly depends. For setting up three hurdles, an implement known as a fold-pitcher is used. The person who sets the hurdle, having made a hole in the hedge, or close to the dyke, for the foot of the first hurdle, he marks on the ground the place where the other foot is to be inserted, and then makes a second hole, which, like all others, should be nine inches deep. With the left hand the hurdle is put into its place, and held upright, while lightly pressed down by the left foot on the lowest slot. This being done, the third hole is made opposite to, and about six inches from the last. The fold-pitcher is then stuck in the ground near where the next hole is to be made; the second hurdle is next placed in position, one foot on the open hole, and the other foot marking the place for the next hole, and so on throughout the whole row. When the place of a second foot of a hurdle is marked on the ground, the hurdle itself is moved out of the way by the left hand, while the whole is made by both hands. When the whole row is set, it is usual to go back over it, giving each head a slight tap, so as to regulate their height, and make them retain their hold more firmly in the ground. To secure the hurdles steady against the rubbing of the sheep, couplings, or copses, are put over the heads of each pair where they meet, which is a sufficient security. These couplings are made of the twigs of willow, holly, beech, or any other tough shoots of trees, wound in a wreath of about five inches in diameter.

HUSBAND AND WIFE. LEGAL RELATIONSHIP OF.—On the marriage being constituted, the parties are bound to adhere with fidelity to each other; and the husband must support his wife according to his circumstances, unless she have property of her own sufficient for her support, with which the husband cannot interfere. The moveable property of both, including the property of the wife's heritable subjects, stock standing in her name, ready money, plate,

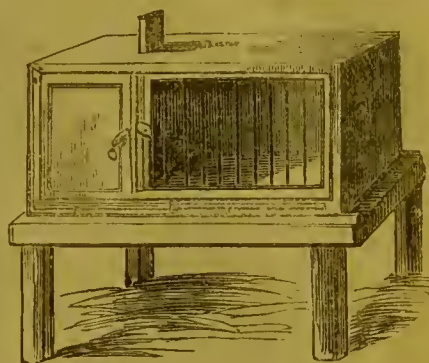
furniture, jewels, even the profits of her personal labour and skill, become the property of the husband. The marriage operates like a deed of assignment, so that the husband can sue for the recovery of these rights of his wife, in his own name, and without her concurrence; and any attempt on her part to defeat him, is held to be fraudulent. The common moveable property of the parties is sometimes called the goods in communion; and yet the wife, during the marriage, has only a hope of getting a share of it—her right in it not being indefeasible till the death of her husband. The husband's right is called his *jus mariti*. In virtue of this right he may sell, gift, or waste the common property at his pleasure, and his creditors may attach it for his debts. The wife's paraphernalia, comprehending her personal attire and ornaments, and such articles of a kind used by either party as the husband may have gifted to her before the marriage, are excepted. Besides having this right to her moveables, the husband, on the marriage, becomes her legal guardian. He may, however, renounce both his *jus mariti* and his right of administration, and where he does so, the wife can act in reference to her own estate independently of her husband, and altogether as fully and freely as if she were unmarried. But the husband may renounce his *jus mariti* and yet retain his powers of administration, in which case the wife can only act with his concurrence. Third parties may convey property to a wife conditionally, and so as to exclude all the rights both of the husband and his creditors, as by declaring the conveyance to be purely alimentary and exclusive of these rights; or by conveying to trustees for her behalf, with a similar exclusion of the husband and his creditors. A wife, by her own ante-nuptial contract, may reserve all the rights which she possessed as a single woman. After, however, a marriage is entered into, a husband cannot renounce his *jus mariti* to the prejudice of his creditors; and even when the renunciation is not to their prejudice, it seems to be in the nature of donations between husband and wife, which are revocable at pleasure during the existence of marriage. In law, the husband is liable, so long as she remains alive, for all the personal debts contracted by his wife previous to the marriage, but this liability terminates on her death, unless his estate were attached by "complete legal diligence" during the marriage, or unless he was a gainer by the marriage to a considerable extent. Even when made liable on the ground of having received some excessive advantage, it is only in the event of the wife's separate estate being found insufficient that he becomes personally liable. During the marriage the husband, and not the wife, is liable for all domestic furnishings which she may order, and such furnishings may be proved against him by her attestation or evidence. In other respects she is not received in evidence against her husband, except in the case of assault committed by him against herself. For furnishing unsuitable to his condition

in life, made on the order of a wife, the husband is not liable, neither is he liable for any fine in which she may be subjected by a court of law as the punishment of her crimes. In this last case, however, so entirely is a wife's person exempted from imprisonment during marriage (except in a few instances), that when a fine is awarded against her on account of her crimes, it cannot be enforced by her imprisonment until the death of her husband. Indeed, even for her apparent crimes she may be relieved of all consequences, if it clearly appear that she acted under the compulsion of her husband. When, however, she voluntarily acts on her own account, or in concert with him, in the commission of crime, she is liable in criminal punishment. Where a husband is abroad, a wife's obligations for necessities are effectual; and if, in order to procure a livelihood while her husband is abroad, she engage in trade, she then becomes, even during his life, liable to imprisonment for her debts. A partial measure has recently been passed, providing that married women may, by deed acknowledged in manner required by the Act, with their husband's concurrence, dispose of every future and reversionary interest to which the woman, or her husband in her right, shall be entitled in any personal estate under any instrument made after the 31st December, 1857, and relinquish or release any power she has on her right or equity to a settlement out of any personal estate, but the power does not extend to any reversionary interest which she is restricted from alienating, nor does it enable her to dispose of any interest on personal estate settled upon her by any settlement, or agreement for a settlement, made on the occasion of her marriage.

HUSBANDRY, Books: *Tusser's*, 2s. 6d.; *British*, 8s.; *Doyle's Cyclopædia*, 12s.; *Rham's Flemish*, 1s. 6d.; *Andrew's Modern*, 6s.; *Rawsterne's New*, 9s.; *Daubeny's Roman*, 12s.; *Ridgway's*, 3s. 6d.; *Lillet's Fork and Spade*, 8s.

HUTCH.—A species of hovel in which rabbits, guinea-pigs, &c., are kept. The hutch should stand upon a dry foundation, and be well ventilated. Each hutch intended for breeding should have two compartments, one to feed, and the other to sleep in. The floor of the hutches should be planed smooth, to allow the wet to run off, and a common hoe, with a short handle and a small broom, are convenient for cleaning the hutches. The breeding hutches should be about five feet high, two feet six inches deep, and four feet long; about one-third of this length should be separated from the other by a panel and arched doorway, separating the sleeping from the feeding compartment. Above this, there should be a sliding door, which can at any time be put down, so as to shut the doe into either compartment, as occasion may require. The edges of the doorway should be cased with tin, as should also the edges of the feeding trough, and, in short, any other part that the animal can get at with the teeth. The front of the hutch has two doors, one of which belonging to the inner apart-

ment, is made of boards, and the other belonging to the feeding-room, is open, having wire-work let in; both these doors are fastened by buttons in front, but open in a contrary direction. The bottom of the hutch should have a long narrow piece of wood in front below the bars, which should



be movable, so as to allow cleaning to be more readily performed. In placing the hutch upon the stand, it should be set a little aslant backward, and a small hole should be drilled at its back partition, for the purpose of letting all liquid pass off.

HYACINTH.—In the culture of this flower, much depends, in the first place, upon the quality of the bulbs, which should be perfectly ripe, and the sooner obtained after their arrival the better, for it is highly objectionable to expose them much to the air, except just to throw off any moisture they may have attained during their transmission. Always select the largest and best shaped bulbs, rejecting as a rule those that are loose in texture and small. If the base of the bulb is sound and ripe the other portion can be depended upon, and, in fact, this is the only guide to follow in regard to such kinds as *Poreelain Sceptre*, *Prince Albert*, and many others of the best sorts which have wretched-looking bulbs; it is, therefore, best for the amateur to leave the selection to those who are well acquainted with their properties until by experience he can trust his own judgment. The compost is another important point; this should consist of an equal portion of turfy loam and well decayed cow-dung previously prepared by exposure to air, by frequent turnings, so as to thoroughly incorporate them; and to this add about one-third silver sand, for they delight in a gritty open soil; 6-inch or 32-sized pots give plenty of room for their strong roots. Fill the pots about one-third with draining materials—broken oyster-shells or potsherds—and the remaining two-thirds with the compost; clear the root of all off-sets and loose parts, and press tightly into the soil, leaving one-third above the surface; then water them sufficiently to settle the soil, and plunge them a foot at least under coal-ashes or old tan out of doors, or in a cold pit or frame. This is done to cause them to make roots before the crown is excited

into growth: this is the most essential point for unless the pot is well filled with roots good flowers cannot be obtained. In a month or six weeks, the latter being the better time, take as many as may be required for the earliest blooming, and gradually inure them to light previously to placing them in the forcing pit, and as soon as these show their colour proceed with others in the same manner. The end of September is soon enough to pot the earliest sorts, repeating the operation until the end of November, by which means a succession of flowers can be had from Christmas till April. The finest flowers will be obtained from those not too strongly forced. Hyacinths should be well



attended to, after they have bloomed, great care being taken that the foliage does not get injured, as on this depends in a great measure their successful flowering afterwards, though they seldom bloom so finely as the first season from a good maiden bulb. When the leaves have perfected their growth, and have begun to assume a yellow tint, water must be withheld, and when withered the bulbs may be dried off. The second season they may be planted out of doors in turfy loam, very rotten cow manure and leaf soil in equal parts, with say one-sixth silver sand.

HYDROCEPHALUS.—See **WATER ON THE HEAD.**

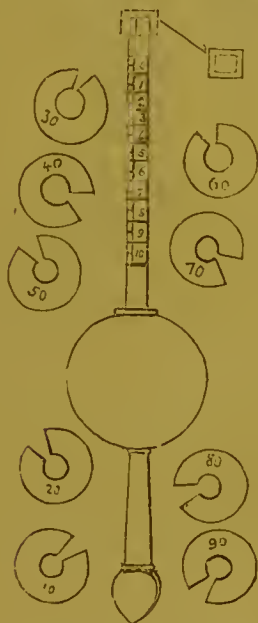
HYDROCYANIC ACID.—Cyanide of hydrogen, or prussic acid, was first discovered

by Scheele in 1782, from Prussian blue, of which it may be regarded as the basis. This acid, which in its pure state is one of the most potent poisons known, has in a mitigated form been extensively employed in medicine from the commencement of the present century, and has been employed with the utmost advantage in spasmodic coughs, asthma, hiccough, and sea-sickness, and as an external remedy in some obstinate eruptions of the skin, and in many forms of opacity of the cornea, and general dimness of sight. The want of a uniform British College is particularly evidenced in the preparation of this drug, each of the Colleges of London, Edinburgh, and Dublin having a different formula and strength for this acid. All of them, however, being prepared by decomposing some of the compounds of cyanogen, which, being a bi-carburet of nitrogen, consisting of two equivalents of carbon and one of nitrogen, unites with two equivalents of hydrogen, to constitute hydrocyanic acid. For the sake of uniformity of strength, it has long been the custom of all medical men, having any extent of practice, to prepare the diluted, or medicinal preparation of this acid themselves; and to effect this object, seventy-five grains of tartaric acid and thirty-three grains of the cyanuret of potassium were dissolved in ten drachms of distilled water and spirits of wine, in the proportion of two parts to one; by which means a double decomposition is effected: the tartaric acid is converted into the nearly insoluble super-tartrate of potass—cream of tartar—and the liberated cyanogen unites with the water to make a safe, manageable, and uniform medicinal hydrocyanic acid; the dose of which, to have any effect in the cases for which it has been prescribed in this work, must not be less than five drops, which by repetition may be increased with perfect safety to fifteen drops. As, however, it appears that all chemists do not keep the same formula, and many procure the acid from their druggists, and are ignorant from which preparation it has been procured, it will be advisable for all who feel inclined to try the efficacy of hydrocyanic acid, as occasionally prescribed, to ascertain from the chemist the nature of the preparation kept, bearing in mind that of the proper medicinal strength, the dose to be beneficial should begin with five drops, and may be increased to fifteen.

HYDROGEN.—This important element is only known to us in the gaseous or permanently elastic form. It is usually procured by the action of sulphuric acid and zinc or iron upon water, or by passing the vapour of water over red-hot iron.—See *Dictionary of Useful Knowledge*, article **HYDROGEN**.

HYDROMETER.—An instrument for determining the relative densities or specific gravities of fluids. The instrument known as "Sykes's Hydrometer," is the one almost universally used. It consists of a thin brass stem about six inches long, passing to and soldered on a hollow ball of the same material, and about an inch and a half in diameter. To the inferior extremity of the stem, from

which the hollow ball is about an inch distant, a permanent pear-shaped weight is attached; so that when the instrument is placed in a fluid, the other extremity may float perpendicularly to the surface. There are also ten weights of different magnitudes, nine of which are circular and applicable by means of a slit to the lower part of the stem. These are marked 10, 20, 30, 40, 50, 60, 70, 80, and 90 respectively, and by their successive application the instrument may be sunk so as to obtain the complete range of specific gravity, from that of pure alcohol to that of distilled water. The other weight is of the form of a parallelopiped, and may be fixed when necessary to the upper branch of the stem. The upper branch of the stem is divided into ten equal parts or degrees, each of which is again divided into two parts. The whole is adjusted at the temperature of 60° Fahrenheit, and tables are computed whereby the necessary corrections may be determined for all variations above or below that point. In order to determine the strength of spirit by means of the hydrometer, a portion is placed in a tall glass cylinder, and the temperature



observed. One or more of the circular weights is then attached to the lower stem of the instrument, so that the lower extremity of the scale may sink beneath the surface of the fluid, and when the whole has become stationary the number on the scale in contact with the surface of the fluid is observed. This number, added to the number marked upon the circular weight employed, will give a third number, adjacent to which, in the tables above mentioned, and under the head of the proper temperature will be found the percentage of strength required.

HYDROPATHY.—A mode of curing diseases by the copious use of pure cold water, both internally and externally, together with dry sweating and the due regulation of diet, exercise, and clothing. The adoption of this treatment under ordinary circumstances is very inconvenient, and in some cases impracticable; and in order to render its practice more available, hydropathic establishments are located in various parts of the country, where patients place themselves under a course of treatment for a specific term.—Books: *Bushman's Treatise*, 4s.; *Claridge's*, 5s.; *Gubb's*, 4s. 6d.; *Morsell*, 2s. 6d.; *Shew*, 5s.; *Wilmot*, 1s.; *Armitage's*, *Applied to Acute Diseases*, 3s.; *Johnson's Domestic*, 6s.; *Claridge's Facts and Evidences*, 1s. 6d.; *Weiss's Handbook*, 7s. 6d.; *Johnson's Letters*, 1s. 6d.; *Johnson's Results*, 1s. 6d.; *Franklin's Theory*, 5s.; *Johnson's Theory & Practice*, 1s. 6d.; *Balbirnie's Aphorisms*, 1s. 6d.; *Lane's Treatise*, 13s. 6d.

HYDROPHOBIA, or dread of water, as the name signifies, is a disease peculiarly affecting the nervous system, caused by the bite and absorption into the blood of the saliva, or *virus*, as it is called, of some rabid or strongly irritated animal, but most frequently of the two domestic species, the dog and cat, though, from the almost analogous symptoms excited in the system by certain accidents, eventuating in what has been called *tetanus*, the two diseases by many medical men have been considered as synonymous. The influence exerted by the mind on the body, both for good and evil, is a fact well known to the most casual observer, but in no instance is that effect exercised with more dangerous consequences than in the disease under notice; for it is unquestioned that many persons have been forced into a state of hydrophobia, simply through the terror inspired by the scratch or abrasion of an animal perfectly in health, though perhaps under a temporary fit of displeasure or pain. The peculiarity of this disease, is the great length of time that usually takes place between the receipt of the accident, or bite, and the disease itself, or the manifestation of the constitutional symptoms; sometimes weeks elapse, at others months, and not unfrequently years have supervened between the cause and the effect.

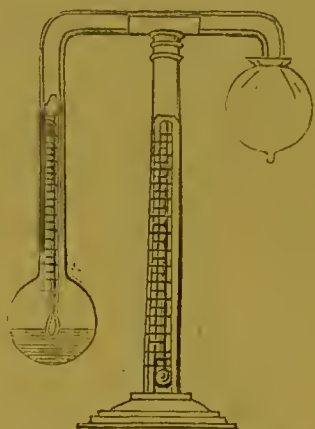
Symptoms.—At whatever time these may show themselves, they commence with wandering pains over the body, anxiety, restlessness, disturbed sleep, and frightful dreams, the patient starting up in horror and bedewed with cold perspiration; by degrees muscular contractions occur at intervals, weight and oppression of the stomach, a tightness in the throat, and difficulty of swallowing, till suddenly the crowning symptom takes place, and the patient, in attempting to drink, is seized with a sudden horror, and recoils in terror from the wished-for potation; the very sight or sound of water, or the motion of fluid, throwing the body into violent convulsions. From this stage the symptoms rush on to their climax; the countenance is contracted, the eyes wild and staring, the

teeth set firmly, and with the tightened lips covered with a ropy foam, or a thin watery saliva pours from them; this state is alternated with shrieks, animal noises, bilious vomitings, convulsive jerks and plunges, till one fearful spasm that draws the body like a bent bow, resting on head and heel, releases the patient from his sufferings.

Treatment.—The hot bath, electricity, blisters, bleeding and opium in immense doses, are the only agents that art can employ in this formidable disease; the most violent measures and the most opposite have been resorted to; but, unfortunately for science, hitherto with but little effect or benefit. In no disease is the old adage of "prevention better than cure" so applicable as in this. For the tranquillity of mind, for the satisfaction of the patient, and for motives of safety, in all cases of bite or abrasion from the tooth of an animal, the part should be cauterised. A tape or bandage being first tied tightly above the part to prevent absorption, the part is then to be washed with warm water, and lunar caustic then applied. If these steps are adopted quickly and effectually, and, if possible, the part sucked or dry-cupped before applying the caustic, and the ligature or pressure continued for some time, there will seldom be any necessity for the painful and questionable practice of excision. The patient's mind must be soothed; an aperient and a sedative given, and a warm poultice applied over the eschar. A mode of treating hydrophobia by means of ice, internally, down the spine, over the throat and chest, has been adopted with success, but the cases are too few to warrant pronouncing it as either safe or certain.

HYGROMETER.—A vast number of substances, such as sugar, flour, bread, &c., possess the property of absorbing moisture, the amount of which varies according to the circumstances in which they are placed. Atmospheric air also, and most gases, absorb and retain watery vapour, so that in all experiments regarding the composition of bodies, it is necessary to ascertain their state as to dampness. The values of many commodities are greatly influenced by the quantity of moisture which they hold, and hence the utility of having some means of ascertaining this quantity. This instrument is represented in the accompanying figure. It consists of two hollow glass balls, containing ether, and communicating by the glass tube which rests on the support. The ball which forms the termination of the longer branch is of black glass, in order that the formation of moisture on its surface may be the more perceptible. It includes the bulb of a delicate thermometer dipping in the ether, its scale being enclosed in the tube above the ball; and whatever change takes place in the temperature of the ether is indicated by this thermometer. The other ball is covered with muslin. In making an observation, it is first necessary to note down the temperature of the air; next turn the instrument, so that when the covered ball is held in the hand, the ether may

escape into the blackened ball; and it should also be held till the included thermometer rises a few degrees above the temperature of the air, when it should be replaced on the support. Then drop, or gently pour, a little ether on the muslin. The evaporation which takes place, produces cold; and attention must be instantly directed to the black glass ball and included thermometer. The latter will be seen falling rapidly, and at length a ring of moisture will be seen at the line which runs across the black ball, quickly, if



the surrounding atmosphere is very moist; slowly, if it is dry. The degree at which this takes place, must be carefully noted. In very damp or windy weather the ether should be very slowly dropped upon the ball, otherwise the descent of the thermometer will be so rapid, as to render it extremely difficult to be certain of the degree. In dry weather, on the contrary, the ball requires to be well wetted more than once to produce the requisite degree of cold.

HYPOCHONDRIASIS.—This functional disturbance of the digestive organs, is generally found in melaeholic temperaments, and presenting features of a purely nervous character, derives its origin from some preternatural condition of the function of digestion; though the often grave symptoms that supervene, might, to the uninitiated, appear to depend upon some organic disease, either of the heart or brain, so remarkable and various are the characters evoked by this disease; the hallucinations of the mind amounting, in many instances, to positive monomania. So far, indeed, does the imagination become erratic, that the patient sometimes believes in his own death; will lay himself out like a corpse, refuse all food, obstinately remain silent, and would die from inanition, but for the friendly violence of his physician; others believe themselves made of glass, and are almost killed in reality by the terror excited by the approach of a friend, who, in his cordial offer of shaking hands, excites the

wildest terror, lest, ignorant of the fact of his altered state, he should, in his rude friendship, shiver him to pieces. The delusions and imaginings of the hypochondriac are illimitable, and there is no disease in the nomenclature of science that demands such skill, so much tact, or so shrewd a knowledge of human nature in the physician as is called for in this. The treatment demanded, is often more moral than physical, and, in either case, calls for great judgment and determination. The first object to be effected is, restore the stomach and assistant organs to a healthy action; the next, to restore energy to the brain and nervous system, and to correct the morbid association of ideas that pervert the whole tenor of the patient's life; sometimes the last becomes the first and most important step; indeed, each object must be, in a measure, concurrent with the other. In such a disease, it is only possible to point out the means; their mode of employment must depend upon the speciality of the case to be treated. These are, change of scene, habits, and purposes, exercise, bathing, society, cheerful amusements, harmless sports, with new and interesting or exciting pursuits; next to these moral remedies, the medicinal agents are chalybeate and mineral waters, stomachics, tonics, antispasmodics, wine, external stimulants, electricity, and all the mineral acids and tonics.

HYSTERIA.—This disorder is more common in females than men, and is characterised by low spirits, a feeling of depression and anxiety, sudden and involuntary grief and tears, palpitation, sickness, a sense of suffocation, and the apparent presence of a ball in the throat; these symptoms are or are not attended with sobs, and sudden fits of laughter, convulsive twitches, and contractions of the hands and arms, finally terminating, after more or less muscular contortions, in insensibility and coma. *Treatment.*—In robust young patients, when the fit is strong it is necessary to bleed, but in general the sudden application of cold water dashed in the face, and pungent stimulants applied to the nostrils, will be found sufficient to restore the patient to consciousness. If not, a draught of sal volatile, water, and spirits of lavender, is to be given; and should much stupor or drowsiness continue after recovery, a blister must be applied to the nape of the neck. As hysteria generally depends upon some natural cause, the source of excitement is to be found out and removed; and as a preventative a course of aperient medicine, varied with an occasional assafoetida pill, is to be taken for a series of days, till the cause for which it was taken is removed. One of the best medicines that can be taken as a corrective to the system, and a stimulant of impaired natural action, is an infusion of equal parts of wormwood and pennyroyal, made with boiling water, and taken in cups twice a day for three or four days in succession every fortnight, followed on each occasion by one or two compound assafoetida pills.—See FAINTING.

I.

ICE.—In medicines, ice is frequently employed, externally in inflammation of the brain, to resolve inflammation, to stop hæmorrhage, to astringe relaxed parts, and to deaden pain. For these purposes it is pounded small in a cloth, and placed in a bladder, or a bag of gauze, before applying it. Internally, ice, or ice-cold water, has been given with advantage in heart-burn, typhus, inflammation, and spasms of the stomach, to check the vomiting in cholera, and to arrest internal hæmorrhage. Small lumps of ice, or a small glassful of pounded ice and water, will often temporarily restore the tone of the stomach and nervous system during hot weather, when all other means fail. Ice creams, taken in moderation, act in the same way.

ICE-CREAMS.—These are commonly composed of cream or sweetened water, variously flavoured, and coagulated by ice or a freezing mixture. Sometimes, instead of cream the materials of a custard are used. The mixed ingredients are placed in a tin, furnished with a handle at top, called a freezer or freezing-pot, which is then plunged into a bucket containing salt and ice (ice broken small and mixed with half its weight of common salt), and is kept in rapid motion backwards and forwards until its contents are frozen. As the cream congeals and adheres to the sides, it is broken down with the ice-spoon, so that the whole may be equally exposed to the cold. As the salt and ice in the tub melt, more is added until the process is finished. The ice-pot with the cream in it, is next placed in a leaden ice-stand, is at once surrounded with a mixture of ice and salt, and closely covered over. The glasses are filled from this as required for immediate use, and should have been previously made as cold as possible. Plain ice-cream is commonly made by one or other of the following formulæ: 1. New milk, 2 pints; eggs, 6 yolks; white sugar, 4oz.; mix, strain, heat gently, and cool gradually. 2. Cream, 1 pint; sugar, 4oz.; mix as before. 3. Cream, 1 pint; milk, 1 pint; white sugar, ½lb.

Flavoured ice-creams are made by mixing cream for icing with half its weight of mashed or preserved fruit, previously rubbed through a clean hair sieve; or, when the flavour depends on the juice of fruit or an essential oil, by adding a sufficient quantity of such substances.—See CURRANT; LEMON; RASPBERRY; STRAWBERRY, &c.

ICE-COOLER.—See COOLER.

ICE-HOUSE.—A receptacle in which ice is kept so as to furnish supplies from time to time as they are wanted. Wooden structures will be found the best for this purpose. The sides may be built on the principle of hollow walls, the uprights being of nine-inch battens edgewise, and boarded up on both sides, leaving a vacuum of nine inches between; or this space may be filled up with

dry straw or sawdust, finely sifted coal-ashes, or any other non-conducting material. The roof should be thatched with straw, reeds, or heather, at least two feet in thickness, and the sides covered with the rugged bark of trees, or with moss, or panelled off in ornamental patterns, with straight rods of hazel, larch, or otherwise in imitation of rustic work. Ice-houses should be in all their parts as dry as possible; and they should be so constructed as to ensure the running away of the meltings as quickly as possible. The ice-house should stand on a place exposed to the sun and air. The next thing is to protect the ice against damp from beneath. It should therefore stand on some spot from which water would run in every direction, and if the natural ground present no such spot, it would be no difficult matter to construct one. The best form for an ice-house is the circular, as seen in *fig. 1*. In



Fig. 1.

fig. 2, *a* is the centre of a circle, the diameter of which is ten feet, and at this centre a post should be set up, to stand fifteen feet above the level of the ground, which post ought to be about nine inches through at the bottom, and not a great deal smaller at the top. Great care must be taken that this post is



Fig. 2.

perfectly perpendicular, for if it be not, the whole building will be awry. *bbb*, represent twenty-eight posts, nine feet high, and six inches through at the bottom, without much tapering towards the top. These posts stand about two feet apart from centre to centre, which leaves between each two a space of eighteen inches. *cccc*, are thirty-eight posts, five feet high, and five inches through at the bottom, without much tapering towards the top. These posts stand

about two feet apart, reckoning from centre to centre, which leaves, between each two, a space of nineteen inches. The space between these two rows of posts, is four feet in width, and, as will be presently seen, is to contain a wall of straw; *e*, is a passage through the wall; *d*, is the outside door of the passage; *s*, is the inside door; and the inner circle, of which *a* is the centre, is the place in which the ice is to be deposited. The walls should be formed between the posts of clean wheat or rye straw, laid closely and smoothly. Plates of wood are to be laid on the top of the two rows of posts for receiving the rafters of the roof. The roof should not be at a lower angle than forty-five degrees, and should be covered with strong laths, to which the roof thatch is to be secured. The thatch should be of wheat or rye straw, and four feet thick. The bed upon which the ice is to be laid, should be formed by laying round logs, about eight inches in diameter, across the area, leaving spaces between them of about a foot. Over these, poles, about half the size of the last, are to be laid across in an opposite direction; and six inches apart over these, a third course, two inches in diameter, and three inches apart; upon these again, a course of still smaller rods, one inch apart; and, finally, upon these, two inches of dry twigs and branches, or strong heath, free from moss or grass; upon this bed the ice is put, broken and pummeled, and beaten down together in the usual manner; when the house is filled it should be shut closely up.

ICE MOCK.—Take of preserved strawberries, raspberries, and red currant jelly, a tablespoonful each; put it through a sieve with as much cream as will fill a shape; dissolve three-quarters of an ounce of isinglass in half a pint of water; when almost cold, mix it with cream, put it into a shape, set it in a cool place, and turn it out the following day.

ICE PAIL.—An implement, by means of which ice-creams may be readily made. The




following are the directions for use:—Having prepared the water or cream mixture, put it into the freezing pot and adjust the appara-

tus; then fill the pail, c. with ice broken up sufficiently small to be admitted into the pail round the freezing pot; but to every three-inch layer of ice, add a layer of salt, using about a fourth as much salt as ice. Press them down with a stick with one hand, at the same time turning the machine with the other, without stopping, for about eight or ten minutes, or until the contents are sufficiently frozen, which will be known by a difficulty in turning the handle, then let the frozen cream remain a few minutes without stirring, and it will be fit for table; but if required to be kept long before use, the wooden peg should be taken out of the pail, and the water let off; then put the plug in again, and refill the pail with ice and salt as before, but use only half the quantity of salt. The object of stirring or rotary motion, communicated to the mixture, is to prevent the outside from being frozen more than the inside; and to induce all to keep a consistence half-way between snow and ice.

ICE WELL.—A receptacle for ice, on a similar principle as an ice-house, the difference in construction being, that one is built above the surface and the other below. An ice well made as follows will be found best adapted to the purpose. Dig a circular well, twelve feet deep by twelve feet wide, and brick it round in nine-inch work; place a roof over it, thatched two feet deep, have on one side a door with a latticed opening in the upper part, and immediately opposite, a latticed window; keep these constantly open, so that there may be always a draught circulating winter and summer. The structure should be moderately shaded with trees, and there must be a drain from the bottom, should the ground require drainage with a trap to prevent the air from entering below by the drain, and the ice should be covered with a foot or two of straw. At the bottom of the well, should be placed a layer of faggots, resting on sleepers, pointing to the drain, so that any water may be carried off. The construction allows of the ice being abstracted every day, with very little if any waste; and the ice will last through the whole year without being exhausted.

ICED CAKE.—Take two pounds of flour well dried, a pound and a half of fresh butter, two pounds of lump sugar pounded, ten eggs well beaten, half a pint of milk, half a pound of candied citron and lemon-peel mixed, cut into strips, a nutmeg grated, a wineglassful of ratafia, and the same quantity of orange-flower water; beat the butter to a cream with a wooden spoon, and add the other ingredients, and when well mixed, two tablespoonfuls of yeast. Let it rise before the fire for half an hour. Bake it in a buttered tin for three-quarters of an hour. Immediately on taking it out of the oven, crust over the top with white of egg, cover over thickly with powdered sugar, and glaze with a salamander.

 Flour, 2lb.; butter fresh, 1½lb.; sugar, 2lb.; eggs, 10; milk, half a pint; citron and lemon-peel, ½lb. (mixed); nutmeg, 1; ratafia, 1 wineglassful; orange-flower water, 1 wineglassful; yeast, 2 tablespoonfuls.

ICING.—A process applied to cakes, and performed as follows:—Whip the white of five eggs to a froth; add a pound of double-refined sugar sifted, and three spoonfuls of orange-flower water; beat it up thoroughly, and when the cake is taken out, ice it with a wooden spatula. Leave it in the mouth of the oven to harden, and do not allow it to contract the least colour. Lemon-juice, instead of the orange-flower water, renders it very white and particularly pleasant to the taste. These cakes may be decorated with gum paste ornaments, either white or in colours.

IDIOT.—An asylum for idiots has been established at Highgate and another at Colney Hatch. Each of these have offices in London, where all particulars respecting admission may be obtained.

IMPERIAL.—A summer beverage made as follows:—Two ounces of cream of tartar; two pounds of loaf sugar; three lemons cut in slices; pour upon these two gallons of boiling water. Let it stand until cold. Strain and bottle it, and in ten days it will be fit for use.

IMPORTS.—Commodities bought in other countries. In transacting his business, an importer has to abide by certain laws of the Customs, and to pay such duties as are levied upon the goods which he imports. —Book: *McCulloch's Directory of Commerce.*

IMPRISONMENT, FALSE.—Every species of confinement constitutes imprisonment, whether it be in a common prison or a private house, in the stocks, or even by forcibly detaining one in the public streets. False imprisonment may also arise for executing a legal process at an improper time; as by arresting in a civil suit on Sunday. In whatever way the illegal act may have been committed, the aggrieved party has his remedy by action at law, and may press for damages, according to the amount of injury sustained.

IMPRISONMENT FOR DEBT.—A debtor can only be arrested after judgment obtained from a competent tribunal, except he is likely to leave the kingdom, under which, if the debt amount to £20, and affidavit be made before a judge, a special order may be obtained to hold him to bail. Any creditor obtaining a judgment or order from any court of competent jurisdiction in England, in respect of a debt not exceeding £20 besides costs of suit, may obtain a summons for such debtor from any Commissioner of Bankruptcy, or any inferior court for the recovery of small debts having for a judge either a barrister, special pleader, or an attorney of not less than ten years' standing, such courts having jurisdiction over the district in which the debtor resides. On the debtor appearing, he may be examined and interrogated concerning the debt; and the court is to make an order on the debtor, for the payment of the debt in instalments or otherwise. If the debtor fail to attend, without affording a satisfactory excuse for non-attendance, or if he refuses to disclose his property or transactions respecting the same, or not answer to the satisfaction of the court, or shall appear to have been guilty of fraud in

contracting the debt, or of having concealed or made away with the property in order to defeat his creditors, or if he appear to have the means of paying the instalments ordered by the court, and neglect to do so, the court is empowered to commit any such debtor to the common goal for debtors, for any time not exceeding forty days. No protection or interim order from the Bankruptcy or Insolvent Debtors Court, nor any certificate obtained after such order for imprisonment is issued, is available to protect the person of the debtor. Imprisonment under the Act does not operate as an extinguishment of the debt; but on payment of debt and costs, or the instalments due, the debtor may be liberated from confinement with the consent of the creditor and the court.

IN-ARCHING.—An ingenious mode of grafting, by which one young plant, without removal, is made to strike upon another plant, and thus form a union. It may be performed in various ways, as represented in the engraving; for example, two branches




of a tree may be bent so as to meet and strike upon a wound in the main stem, by which a gap will be filled up; one growing tree, either from the ground or a pot, may be led to unite with another; or several suckers may be led from the ground arch-wise to strike upon a point in the stem, thus bringing fresh aid to the productive part of the tree. The spring is the season for performing this operation generally, but any season when the sap is in proper condition is equally proper. In order to carry out in-arching successfully, it is necessary that the plants to form both the stock and scion should be either growing near to each other, or, if in a portable state, placed so that their branches may meet. A portion of bark is then removed from each at the intended point of the union, say from an inch to three inches in length, according to the size and strength of the subjects; these parts are fitted together so that the inner barks of both coincide, and the process of tying, and claying or waxing follows, as in common grafting. Some, however, tongue the scion and stock in the same manner as is done in whip-grafting. In either way the cambium shortly becomes developed, the

albumen of the scion and the stock becomes united, and when this is accomplished, the scion may be cut off a little below where it is united to the stock, either at one operation, or only partially cut through first, and in a few days completely severed. A week or two after the union has taken place, the remaining portion of the scion, if any was left in, when separated from the parent plant, should be cut off close to the stock, that the wound may heal over, and leave the stem as perfect as possible. Side-in-arching, without tonguing, is well adapted for young shoots of camellias, oranges, &c.; and when the wood of both scion and stock is soft, and full of sap, a union speedily takes place.


INCOME.—The laying out of an income so as to secure the largest amount of benefit, and to purchase the greatest number of the necessities and comforts of life, may be truly termed an art in social economy. Some persons have the faculty, to use a common phrase, "of making a pound go as far as another person's thirty shillings"—a contrast in expenditure which results rather from the laxity of the spendthrift, than from any extraordinary judgment on the part of the thrifty. It is obvious that if two persons have the same amount to spend, and similar advantages are open to both, they ought to be able to secure an equal value for their outlay; and to do this it is only required for a person to *think and make a proper use of his eyes*. In the disposition of an income, another important consideration is, not to spend all, but to lay by something every week, or month, or year, in order to meet emergencies—such as illness, accidents, &c. Where the income is limited, it is of course, difficult to do this; but in stations however humble, there are mostly certain luxuries indulged in, which might easily be dispensed with, and the cost of which would furnish the provident fund in question. Some persons find a pleasure in thus economizing their incomes, whilst to others it is an irksome process, and one which they have the greatest reluctance to practise; but these latter should bear in mind, that by their energy and perseverance, a larger income may be secured, so as to render these sacrifices comparatively unfelt, so that to a certain extent their own prosperity and happiness remain in their own hands. Again, when a person has a fixed income he usually has to work only during fixed hours, and it is possible for him to turn his leisure time to account, so as to make a sensible addition to his stipend. Before doing anything in which a larger amount than ordinary is involved, the step should be well considered, so as to avoid after embarrassment by an act of thoughtlessness and indiscretion. Thus, previously to taking a house, it should be ascertained whether the income can bear the demand which the rent will make upon it; the same rule applies to the ordering of furniture, clothes, or any other extraordinary disbursement. Having thus used all diligence and judgment in the laying out of the income, the next important step is, to keep accounts of all receipts and

expenditure, on such a clear and straightforward plan, that a cursory glance will at any moment furnish an index of the true state of affairs. In the disbursements of an income, one of the most besetting sins, is a love of finery and display, for the sake of eclipsing one's neighbours and astonishing the world. This is often done not only at a great sacrifice to personal and domestic comfort, but frequently at the expense of honour and happiness, a darkened hearth and a ruined home. No policy can be more short-sighted than this, and no conduct more indefensible; for the person that makes these efforts to win admiration and excite astonishment, can never be certain that the object is gained; whilst he who devotes his income to gathering substantial benefits for his own little world within, neither thinking about, nor caring for the world without, does certainly secure to himself the materials for comfort and happiness, both tangible and unalienable.—See **BENEFIT SOCIETIES, BUILDING SOCIETIES, CASH AND CREDIT, ECONOMY, HOUSE KEEPING, MARKETING, &c.**

INDIAN CAKE.—Take half a pound of butter, with three-quarters of a pound of sugar, and three-quarters of a pound of Indian corn meal, sifted; add eight eggs, a nutmeg grated, or a teaspoonful of cinnamon; rub the butter and sugar to cream, stir in the other ingredients, and when properly set, bake in a moderate oven.

 Butter $\frac{1}{2}$ lb.; sugar, $\frac{3}{4}$ lb.; Indian corn flour, $\frac{3}{4}$ lb.; eggs, 8; nutmeg, 1; or cinnamon, 1 teaspoonful.

INDIAN CORN.—A particular kind of grain which grows abundantly in the south of Europe, and in tropical climates. Bread made from this corn is proved to be highly nutritive, and may be made as follows: take seven pounds of Indian corn flour, pour upon it four quarts of boiling water, stirring it all the time; let it stand till milk warm, then mix it with seven pounds of fine wheaten flour, to which a quarter of a pound of salt has been previously added. Make a depression on the surface of this mixture, and pour into it two quarts of yeast, which should be thickened, to the consistency of cream, with some of the flour; let it stand all night; on the following morning the whole should be well kneaded and allowed to stand for three hours, then divide it into loaves, and bake them in tins for half an hour. It is of importance that the flour of Indian corn should be procured, as Indian corn meal is that which is commonly met with at the shops, and the coarseness of husk in the meal might, to some persons, prove prejudicial.

 Indian corn flour, 7 lbs.; water, 2 quarts; wheaten flour, 7 lbs.; salt, $\frac{1}{4}$ lb.; yeast, 2 quarts.

INDIAN INK.—This article is used in China for writing with a brush, and for painting on the soft flexible paper of Chinese manufacture. An ink of equal efficacy may be made as follows: put six lighted wicks into a dish of oil; hang an iron or tin concave cover over it, so as to receive all the smoke; when there is a suf-

ficient quantity of soot settled on the cover, remove it gently with a feather on to a sheet of paper, and mix it up with gum tragacanth to a proper consistence.

INDIAN PICKLE.—The vegetables to be employed for this pickle are small bard knots of white cabbage sliced, cauliflowers or brocoli in flakes, long carrots, not thicker round than the finger, gherkins, French beans, small onions, white turnip radishes, half grown shallots, young hard apples, green peaches, vegetable marrow not larger than a hen's egg, small green melons, horse-radish, nasturtiums, capsicum, and garlic. As all these do not come in season together, the best method is to prepare a large jar of pickle at such a time of the year as most of the things may be obtained, and add the others as they come in season. Thus, the pickle will be nearly a year in accumulating, and ought to stand another year before using, when, if properly managed, it will be excellent, but will keep and continue to improve for years. For preparing the several vegetables, avoid boiling as much as possible, and soaking in brine to be preferred; be particular that every article is dried before it is put into the jar, and that the jar is very closely tied down every time that it is opened for the addition of fresh vegetables. For the pickle, to a gallon of the best white wine vinegar, add three ounces of salt, half a pound of mustard, two ounces of turmeric, three ounces of sliced ginger, one ounce of cloves, half an ounce each of mace, black pepper, long pepper, and white pepper, and two drachms of cayenne; steep the spice in vinegar, and let it remain on the hob for two or three days. The mustard and turmeric must be rubbed smooth with a little cold vinegar, and stirred into the rest when as near boiling as possible.

INDIGESTION.—See **DYSPEPSIA.**

INDORSEER.—One who signs his name on the back of a bill of exchange or other document, to enhance its validity. A bill payable to *order*, or to *bearer*, or containing any words to make it assignable, may be indorsed over, so as to give the indorsee a claim on all the antecedent parties whose names appear upon the bill. But unless the operative words "to order," or "to bearer," or some equivalent term, be inserted, it cannot be transferred so as to give the indorsee a claim on any of the antecedent parties, except the last indorser. An indorsement by pencil marks has been held sufficient, but is very objectionable. A bill may be indorsed before it is complete, or after the time appointed for payment. In the first case, if a man indorse a blank stamped piece of paper, it will bind him to the amount of any sum which may be inserted, consistent with the stamp, and made payable at any date. If the indorsement be after the bill is due, it is incumbent on the indorser, to satisfy himself that the note is a good one; for if he omit to do so, he takes it on the credit of the indorser, and must stand in place of the person who was holder at the time it became due. No particular words are essential to the indorsement of a bill;

the mere signature on the back of a bill is in general sufficient; such indorsement is called a blank indorsement. A full or special indorsement mentions the name of the indorser in whose presence it is made; as thus, "pay the contents to A. P., or order," and is subscribed with the name of the indorser. Such special indorsement precludes the person in whose favour it is made from making a transfer, so as to give a right of action against the special indorser, or any of the precedent parties to the bill, and from retaining a payment to their prejudice. After a payment for part, a bill may be indorsed over for the residue.

INFANT.—Infants are subject to so many ailments, and prone to such sudden attacks, betraying symptoms, probably in themselves of little consequence, though assuming such formidable characters, as to terrify the inexperienced mother; under this head it is proposed to include the following: the management of still-born children, infants in fits, and the general uses of the hot bath, duration of suckling, and infantine foods.

1. Infants still-born, and in fits, with the use and advantages of the hot bath. All children come into the world in the same imploring helplessness, with the same general organization and wunts, and demanding, either from the newly awakened mother's love, or from the memory of motherly feeling in the nurse, or the common appeals of humanity in those who undertake the earliest duties of an infant, the same assistance and protection, and the same fostering care. It sometimes happens that the infant does not cry, or give utterance to any audible sound, or if it does, it is so faint as scarcely to be distinguishable as human accents, plainly indicating that life, as yet, to the new visitor, is neither a boon nor a blessing. As soon as this state of things is discovered, the child should be turned on its right side, and the whole length of the spine, from the head downwards, rubbed with all the fingers of the right hand, sharply and quickly, without intermission, till the quick action has not only evoked heat, but electricity in the part, and till the loud cries of the child have thoroughly expanded the lungs, and satisfactorily established its life. The operation will seldom require above a minute to effect, and less frequently demands a repetition. If there is brandy at hand, the fingers, before rubbing, may be dipped into that, or any other spirit. If the friction along the spine has failed, a warm bath is to be used, at a temperature of about eighty degrees, in which the child is to be plunged up to the neck, first cleansing the mouth and nostrils of the mucus that might interfere with the free passage of air. While in the bath, the friction along the spine is to be continued, and if the lungs still remain unexpanded, while one person retains the child in an inclined position in the water, another should insert the pipe of a small pair of bellows into one nostril, and while the mouth is closed, and the other nostril compressed on the pipe with the hand of the assistant, the lungs are to be slowly

inflated by steady puffs of air from the bellows, the hand being removed from the mouth and nose after each inflation, and placed on the pit of the stomach, and by a steady pressure expelling it out again by the mouth. This process is to be continued, steadily inflating and expelling the air from the lungs, till, with a sort of tremulous leap, nature takes up the process, and the infant begins to gasp, and finally to cry, at first low and faint, but with every respiration of air, increasing in length and strength of volume, when it is to be removed from the water, and instantly wrapped al but the face and mouth in a flannel. Sometimes, however, all these means will fail in effecting an utterance from the child, which will lie with livid lips and a flaccid body, every few minutes opening its mouth with a short gasping pant, and then subsiding into a state of pulseless inaction, lingering probably some hours, till the spasmodic pants growing farther apart, it ceases to exist. Should the hot bath, friction, and artificial inflation fail of the desired effect, and the infant still remain passive, with the pulsation of the heart feeling under the hand like a faint irregular flutter, remove it from the bath, and having put a few red cinders into a warming pan, lay the child folded in a flannel, but its face and mouth uncovered, on its back along the lid of the pan, the heat ascending through the spine and so reaching the brain, often effecting in a few moments the result that all other means failed to effect, namely, the cry, that in expanding the lungs, propels the blood through the heart, and establishes the child's life. Infants of certain constitutions, and a low condition of vital energy, are not unfrequently attacked during the period of teething with fits, or as they are often improperly called, *convulsions*, and this without the slightest warning; the child that one moment lies crowing in the mother's lap, giving back smile for smile, and the picture of security and health, suddenly becomes rigid, its eyes open, dull, and fixed, the lips become pale, the orbits swarthy, the tiny fingers clinched, and the body often drawn arching backwards. In these cases the treatment is simple and easy; let the mother instantly strip the child, and laying it across her lap, the head to her left side, and the face looking towards her body, rub the spine from the base of the head to the hips, in sharp and rapid sweeps, with the four fingers of her right hand, till the fingers and the child's skin glow with the friction. Should this not cause the child to cry within two or three minutes, she must lay down the infant, and prepare as quickly as possible the warming pan, as in the previous case, and with the intervention of a flannel, lay the little patient across the lid; though if boiling water is at the fire, a hot bath is to be immediately extemporised by mixing *two parts of cold with one of boiling water*, and plunging the child up to the neck in the hot water, and allowing it to cry as much as it pleases; as the more air it receives by the lungs, the more rapid and permanent will be the benefit realized.

2. Period of suckling, food, &c.—Of equal importance with food, in the management of infants, is pure air, and for this desirable object the infant should never, under any condition, be allowed to sleep with the nurse, if old, or even with the parents, but placed in a side bed, in easy and level access to the mother; that when required for the purposes of nursing, it can be easily moved to its mother's arms, and when suckled or fed returned to its crib. The amount of oxygen required by an infant is so large, and the quantity consumed by mid-life and age, and the proportion of carbonic acid thrown off from both so considerable, that an infant breathing the same air cannot possibly carry on its healthy existence while deriving its vitality from so corrupted a medium. This objection, always in force, is still more objectionable at night time, when doors and windows are closed, and amounts to a condition of poison, when placed between two adults in sleep, and shut in by bed-curtains; and when, in addition to the impurities respired from the lungs, we remember in quiescence and sleep how large a portion is given off from the skin.

The greatest mistake a mother can commit is that of over-feeding her child, and believing that every time it cries, it wants nourishment. A young mother should make it her business to study early the voice of her infant and the language conveyed in its cry. The study is neither hard nor difficult; a close attention to its tone, and the expression of the baby's features, are the two most important points demanding attention. The key to both she will find in her own heart, and the knowledge of her success in the comfort and smile of her infant. Mothers should early make themselves acquainted with the nature and wants of their offspring, that when left to the entire responsibility of the baby, after the departure of the nurse, she may be able to understand her new duties with more confidence than if left unaided to her mother's instinct. To ensure a pure and invigorating supply of nourishment to the child the mother should live well in every respect, but, at the same time, if she would avoid the cries and inconvenience that arises from an acid dietary, affecting her infant with griping and flatulent pains, she will eschew all acid or indigestible foods, and live as much as possible on plain and unvarying aliments, avoid over-feeding, late hours, or any sudden exertion that may heat or disorganise the milk.

The time a mother suckles her infant should never be less than *nine* or exceed *twelve* months, unless some special reason is adduced for either; for it may be taken as an invariable rule, that when nature puts teeth in a child's mouth, they are meant for use. The articles generally employed as food for infants consist of arrowroot, bread, flour, baked flour, prepared groats, farinaceous food, biscuit powder, biscuits, tops and bottoms, and semolina or manna croup, as it is otherwise called, which like tapioca, is the prepared pith of certain vegetable substances.

INFECTION.—See CONTAGION; DISINFECTION.

INFLAMMATION.—By this term is generally understood that condition of a part, in which it becomes painful, hotter, redder, and more turgid than in a state of health. The more considerable these symptoms become, or when they take place in very sensitive parts, they induce that condition of the system known as fever, and which, when the primary symptoms occur in certain tissues, becomes inflammatory fever. The seat of inflammation lies in the capillaries, those minute vessels or tubes that in health perform the office of secretion and nutrition, but diseased, become distended with red blood, consequently swell and cause the enlargement, the first symptom of inflammation; at the same time the increasing quantity of blood accumulating in the part, causes the redness and accession of heat; while the rigidity, tightness, and weight induced by the collected blood pressing on the sentient nervous filaments below, produces the dull, the sharp, or hot throbbing pain experienced, according to the situation of the swelling, and constitutes the last and most distressing symptom of local inflammation.

All inflammations are either local or general; when local, and attacking an organ, the disease is named after the part affected, as hepatitis—inflammation of the liver, phrenitis of the brain, gastritis of the stomach, and so with respect to other organs; but when it is general, as already said, it is called inflammatory fever. As there are degrees in the rapidity or slowness with which inflammation takes place, and also in the time the disease continues, inflammation has been divided into the *acute*, the *sub-acute*, and the *chronic*, each form demanding a separate and peculiar practice. Nature, that in all forms of disease attempts to effect a cure, has in the case of local inflammation provided several means, the chief of which are—1st. Resolution, which is a gradual absorption of the accumulated blood. 2d. By hæmorrhage, or the bursting of the distended part, and the escape of the blood. 3d. By suppuration, or the conversion of the effused blood into pus, or matter, which, gradually pressing on the skin, causes absorption of its texture till an aperture is formed and the contents of the abscess escape; and 4th. By gangrene, or mortification, which, when a part has been killed by excessive inflammation, forms a line of demarcation, and separates the dead from the living part. The symptoms, general and local, of inflammation, are materially altered by the structure of the part in which the disease takes place; thus, the heat is much less, the pain infinitely more acute, and the pulse hard and sharp, when the inflammation attacks the *serous* membrane, or that tissue which lines the chest; while in the *mucous* membrane, or that which lines the mouth and stomach, there is less pain, more heat, and a full, round pulse. The treatment of inflammation is both general and local. By the first is understood, bleeding from the arm, tartar emetic, opium, and saline purgatives; the latter, leeches, cupping, blisters, baths, and fomentations. For the

treatment of special cases, see BRAIN; LIVER; LUNGS, &c. And for external inflammations, see ABSCESS; BOILS; CARBUNCLE; WHITLOW, &c.

INFLUENZA.—A disease which, though unquestionably common to this country from remote time, has only within the last thirty years obtained a distinctive name and character. What the peculiar state of the atmosphere is, that induces or predisposes to this disease, science has not yet discovered, though the external causes, as far as appreciation enables us to form an opinion, appear to be, a long-continued state of humidity, succeeded by sudden heats, or seasons of alternate hot and wet weather, or a long humid autumn followed by a cold and boisterous winter. In these conditions of the climate the disease often becomes epidemic, and puts on a protean shape, and though twenty persons in the same tenement are attacked with it, not two perhaps present the same chain of symptoms, or have been seized in the same way. The first sign of illness in one is a sudden coma, that deprives the patient for some minutes of all consciousness; another falls in a fit, a third is seized with an intense pain on the top of the head, others by fits of sudden heat or cold, by coughing, or pains in the back, chest, or throat; but however varied the commencement may be, or different the general run of symptoms, there are three signs that, taken together, always characterize influenza, and by which it may in every case be at once identified; these are—severe and splitting pain on the top of the head, great and sudden loss of strength, and a rough excoriated sensation in the chest behind the breast bone, as if the lining membrane in that part was raw. When influenza comes on gradually, the disease generally puts on the following succession of SYMPTOMS: a sense of cold, lassitude, weariness, cold chills, pains in the back, head, and loins; these symptoms are followed by flushings, weight on the head and great oppression on the chest, sneezing, the eyes become bloodshot, a thin acrid discharge from the nostrils occurs, with inflamed fauces and throat, followed by a short cough with a thick viscid expectoration, which soon becomes thin, discoloured mucus, mixed with purulent discharge. With these symptoms there is extreme prostration of strength, loss of energy, and great depression of spirits, the pain on the head continuing with unabated violence. The pulse, which at the beginning was quick and small, becomes, as the disease progresses, sharp, weak, and irregular. From the first the appetite has failed, the tongue furred, and the stomach in a state of nausea and often irritated to vomiting. The discrepancy in the state of the pulse in influenza generally renders it an insecure guide to a knowledge of the heart's action by the number or the frequency of the beats; the only true test of the vital strength of the patient is by the amount of pressure it will bear by the finger. Influenza, if not speedily cured, is very prone to degenerate into bronchitis, pneumonia, pleurisy, or some chronic thickening of the mucous mem-

brane, of the throat, or enlarged tonsils. *Treatment*—the foremost point to be remembered in the treatment of this disease is, that the great debility is *real*, not a prostration dependent on nervous pressure, but a *bona fide* loss of vital power; consequently, bleeding, strong relaxing medicines, or blisters, are, except in very rare cases, highly injurious, and more likely to kill than cure the patient; the treatment therefore required is more a course of judicious dietary than one of physic. The medicinal means must consist of the following mixture and pills, the keeping the feet hot by hot bricks, or bottles of water, and a hot bran poultice applied frequently to the neck and chest. Take of the—

Powder of compound tragacanth, 2 drachms.

Hot water, $\frac{1}{2}$ pint.

Lump sugar, 2 drachms.

Mix in a mortar, adding the water slowly till a smooth thin mucilage is made of the whole; then add—

Tincture of tolu, 1 drachm.

Ipecacuanha wine, $\frac{1}{2}$ oz.

Spirit of nitre, 6 drachms.

Shake well together, and, lastly, add solution of acetate of ammonia, 15 ounce. Mix, and make a 12 ounce mixture; of which let the patient take two large tablespoonfuls every four hours.

Take of—

Compound rhubarb pill, $\frac{1}{4}$ drachm.

Extract of henbane, $\frac{1}{4}$ drachm.

Mix, and divide into 12 pills, two to be taken at bed time every other day.

To support the strength, the food must be of the lightest and most nutritious kind, such as boiled mutton, custards, and sago puddings; and, as frequent stimulants are indispensable, claret glasses of warm egg-flip, either made in the usual way with the addition of a little rum or brandy, or egg-sherry must be given, with toast, every two hours. By these means, and the addition of 20 drops of laudanum, at bed time, to a dose of the mixture, all ordinary cases of influenza may be safely and expeditiously treated to recovery.

INFUSION.—This is one of the most frequent operations required in making up medicines, its object being to extract the aromatic and volatile principles of substances that would be lost by decoction or digestion; and to extract the soluble from the insoluble parts of bodies. Infusions may be made with cold water, in which case they are weaker, but more pleasant. The general method employed, consists in sherry, brandy, or powdering the ingredients first, then placing them in a common jug (which should be as globular as possible), and pouring boiling water over them; cover the jug with a cloth, folded six or eight times, but if there is a lid to the jug, so much the better; when the infusion has stood the time directed, hold a piece of very coarse linen over the spout, and pour the liquid through it into another jug.

INJUNCTION, IN CHANCERY.—Upon the principle of preventing a civil injury, which a court of equity can only redress, the Court of Chancery interferes, by issuing an injunction to restrain the sale of printed articles, and an order to produce an account of such articles produced and sold. Thus, an author or publisher possessing the copyright of a book, or a patentee having the exclusive privilege to produce a certain article, may take these proceedings to establish his right.

INK-MARKING.—Dissolve, separately, one ounce of nitrate of silver, and an ounce and a half of sub-carbonate of soda, in distilled rain water. Mix the solutions, and collect and wash the precipitate in a filter; while still moist, rub it upon a marble or Wedgwood mortar, with three drachms of carbonic acid; add two ounces of distilled water, mix six ounces of white sugar, ten drachms of powdered gum arabic, and half an ounce of arehil and water; put into bottles and cork securely.

INK-STAINS, TO REMOVE.—When the stains are recent, let one person hold the stained part of the article between his two hands over a basin and rub it, while another pours water gradually from a decanter upon it, and let the whole jugful be used if necessary; if the collar, sleeve, &c., be detached, let it be dipped into a basin filled with water, and then squeezed and dipped in again, changing the water after every two or three squeezes. To remove ink stains of an old date from linen, &c.: put a pint of boiling water into a narrow-necked jug, place the stained part on the top of the jug, and, while wet and hot, with the finger rub in a little salt of sorrel. The acid should remain on the linen for half an hour before it is washed.—*Caution:* Salt of sorrel being a powerful poison, it should be cautiously used, and the paper in which it is placed marked "poison." *To remove ink stains from mahogany.*—Put a few drops of spirits of nitre into a teaspoonful of water, touch the stain with a feather dipped in the mixture, and on the ink disappearing, rub it over immediately with a rag wetted in cold water, or a white mark will be left, which will be difficult to efface. *To take ink stains from paper.*—Make a solution of muriate of tin, two drachms; water, four drachms; and apply it with a camel's hair brush. After the stain has disappeared, the paper should be passed through water, and dried. *To remove ink stains from silver.*—Make a paste with chloride of lime and water, apply a little of it to the stains, and then rub it with a leather or rag. *To take ink stains out of coloured table covers.*—Dissolve a teaspoonful of oxalic acid in a tuncupful of hot water; rub the stained part well with the solution. *To remove ink stains from the hands.*—Wet the stained part with water, and rub a little oxalic acid over it.

INK, SYMPATHETIC.—With a clean pen, write on paper with a solution of muriate of cobalt, so diluted with water, that the writing, when dry, will be invisible. On gently warming the paper, the writing

will appear of a blue or greenish colour, which will disappear again when cool. A solution of muriate of copper forms a yellow and sympathetic ink, and acetate of cobalt a rose or purple. If a landscape be drawn representing a winter scene, the paper being overlaid in the place where the foliage should be, with the green sympathetic ink, then on gently warming the drawing, it will represent summer. Sky and water may be drawn with the blue, and standing corn with the yellow ink.

INK, WRITING.—Boil eight ounces of galls in coarse powder, and four ounces of logwood, in thin chips, in twelve pints of rain water, for one hour; strain the liquor, and add four ounces of green copperas, three ounces of powdered gum arabic, one ounce of blue vitriol, and one ounce of coarse sugar; stir the mixture until the whole be dissolved, then let it subside for twenty-four hours; strain it off speedily, and put it by in stone bottles for use. An excellent ink, suitable for writing with steel pens, which it does not corrode, may be made as follows: sixty grains of caustic soda, a pint of water, and as much Indian ink as is required for producing a proper blackness.

INOCULATION is the insertion of the matter taken from the pustule of small pox, and inserted under the skin of a healthy person, to produce, by that means, a milder form of the disease, than is contracted in the natural way. This dangerous practice has long been superseded by vaccination, and the employment of inoculation now very properly made punishable as a misdemeanour.

INSANITY.—This alarming and dangerous state of the mental faculties, is, fortunately, more frequently the consequence of diseased action elsewhere, or in other words, a symptomatic affection, than the result of an organic or morbid condition of the brain itself. Insanity may arise from any severe constitutional disturbance, or local disease, so long continued as to affect reciprocally the system, hence it is a frequent symptom of all fevers, whether of the nervous or inflammatory type; often supervening upon severe accidents, and very frequently following the shock sustained by the system on the performance of important surgical operations. Insanity may also be idiopathic, or arise without any previous disease, as when the mind has been long kept preternaturally bent on one engrossing subject; or it may proceed from some sudden emotion of the mind, acting on a weakened frame, or from any cause that excites and keeps up a long tension of the reflective powers. It may also arise from organic disease of some part of the brain, or follow from an hereditary taint. Insanity is distinguished from madness, only by the milder character of all the symptoms, and by the subsidence of the incoherency on the suppression of the immediate cause that produced it; whereas, madness is excited by the same causes, and continues for a longer or a shorter time after the subsidence of all the excitement that gave rise to it. The insanity that constitutes what is denominated madness, as a

special disease, we shall not refer to in this work, confining ourselves merely to that state which attends or follows ordinary disease.

Symptoms.—Insanity appears in many forms, seldom showing twice alike; but, as a general rule, its characteristics are in the following order: severe pains in the head; noise in the ears; redness of the face; peculiar wildness of the countenance; rolling and glistening of the eyes; grinding of the teeth; loud roarings; violent exertions of strength; incoherent discourse; unaccountable antipathy to certain persons, particularly to their nearest relatives and friends; a dislike to such places and scenes as formerly afforded particular pleasure; a diminution of the irritability of the body with respect to the morbid effects of cold, hunger, and watching; together with a full strong pulse.

Causes.—Hereditary predisposition; sanguineous temperament; violent emotions of the mind; immoderate indulgence in any passion; violent exercise; frequent intoxication; sedentary life; abuse study; parturition or lactation; tumours compressing the brain; preëeding attacks of epilepsy, fever, &c. *Treatment.*—Before proceeding to the mode of treatment, the following objects are to be strictly borne in mind:—1. To gain a perfect command over the mania. 2. To divert the patient's mind from the existing train of thought. 3. To diminish the preternatural action of the brain. To effect these results, the following remedies must be had recourse to:—1. By bleeding, if of a plethoric habit, and the attack recent. 2. Purgatives; both the drastic and cooling aperitives have been recommended—perhaps the former are preferable; hellebore, senna, and jalap. 3. A spare low diet. 4. Emetics of sulphate of zinc, or of tartar emetic. 5. Nauseating remedies. 6. Cold bath during the paroxysms. 7. Sedatives; hemlock, camphor and henbane; opium is generally prejudicial. 8. Counter-irritants; blisters, setons or issues. 9. Where great debility is present from the first, or supervenes after the employment of active remedies, tonics and stimulants, as in debility from other causes.

Insanity, to a greater or less extent, may be regarded as an effect of many fevers, especially those of nervous order and typhoid type, and though in general the hallucinations of this mental disturbance subside on the decadence of the symptoms, cases arise where the balance of mental power is not restored for some considerable time after the bodily recovery, and others in which a predisposition is left behind, upon which, at the slightest excitement, the insanity returns with perhaps increased severity; in such cases the disease assumes a new phase, and more properly comes under the denomination of lunacy.

INSECTS, TO DESTROY.—Insects commit great havoc among every kind of vegetation, but in fruit trees their depredations are, perhaps, most severely felt. To destroy them, take an old tin watering pan, or any similar vessel, and make a charcoal fire in it; add a tube or pipe, made of either tin, leather, or stiff paper, to the spout, which

may be of any sufficient length; then strew some brimstone, tobacco dust, fine shreds of leather, &c., upon the fire in the pan, and cover the top; having a pair of bellows ready, hold the wind-flap over the tube or pipe, to receive the smoke, which it will do very effectually when you use the bellows. By this means the suffocating vapour may be directed through the bellows to any part of the tree with the greatest ease and facility, and the tree will be soon cleared of all vermin.

INSOLVENT.—This term is applied generally to a person who is unable to pay his debts. The insolvent debtor's law has been designed to protect, from all process against the person, insolvents that have become indebted without fraud or culpable negligence, but so that their effects may be duly distributed among all their creditors. The protection extends only to persons not traders within the meaning of the bankrupt laws, or to traders whose debts amount to less than £300. The difference in the operation of the bankrupt and insolvent laws is as follows:—The bankrupt after receiving his certificate is discharged, not only as to his person, but as to his future acquired property, by which clearance he becomes eligible to resume trade and obtain credit afresh. The insolvent is protected so far as his person is concerned, but not his after acquisitions. At the moment of his discharge, he contracts a future liability to pay his debts, by a solemn instrument which he signs, and which the creditors have the power of enforcing ever after. The insolvent, though personally relieved by due process of law, when no fraud is proved against him, is still liable to the latest period of his life to pay his debts in full; the creditors reserving authority to compel the payment of their debts, when the insolvent is in a condition to liquidate them, by bringing him up from time to time before the court, which will decide whether he be then able to pay his debts out of the property acquired. Any person in actual custody for any debt, may within fourteen days from his first detention, petition the Insolvent Court for his discharge. At the time of subscribing his petition, the insolvent executes an assignment to the provisional assignee of the Court, renouncing all title to his property and effects, except wearing apparel, working tools, bedding, and such necessities of himself and family as shall not exceed the value of £20. During confinement, the Court may order an allowance for the support of the petitioner, or for the expense of making out or filing his schedule; and, in case he does not obtain his discharge under the act, the assignment is void. Persons not actually in custody within the walls of a prison, and during the proceedings thereon, are not entitled to petition. But, after an order has been obtained for hearing the petition, the Court may, in case of sickness properly attested, dispense with the actual custody of the person; in such case, however, if the prisoner goes out of the rules, his petition will be dismissed. It is further enacted that the Court may direct a person to be dis-

charged on his finding two securities to enter into a recognizance to the personal assignee for his appearing at the place and time fixed for his hearing, and to abide the judgment of the Court. After such discharge the insolvent shall be free from arrest by any creditor named in the schedule until the time appointed for his hearing, and such further time as the Court shall appoint. But if the insolvent should neglect to appear, the recognizances will be forfeited, and the amount recoverable by distress and sale; and the Court may issue a warrant to arrest him, and deliver him into his former custody; and all detainers lodged at or since his discharge, will be in force against him. Within fourteen days after the petition is filed, the insolvent prepares a schedule of all his debts, distinguishing such as may be admitted from those disputed by the prisoner, and, also, an account of all his property, and of all effects, fees, salaries, pensions, trusts, and whatever else from which he derives any benefit or emolument; together with an account of all debts owing to him, and the names of the debtors, their places of abode, and of the witnesses who can prove such debts. Lastly, the schedule must describe the wearing apparel, bedding, tools, and other necessities, not exceeding £20, which the insolvent is allowed to retain, with the value of each excepted article. After the petition and schedule are filed, the Court appoints a day of hearing; which in no case must be more than four calendar months from the date of such appointment. At any time after the filing the petition, the Court appoints assignees from among the creditors, to whom on their acceptance of the appointment, an assignment is made of the property and effects of the prisoner for the benefit of his creditors, within three months, at the furthest, and so from time to time as occasion shall require, the assignees shall make up an account of the prisoner's property and effects; and in case of a balance in hand, a dividend must be forthwith paid. In the event of the insolvent being a benefited clergyman, the assignees are not entitled to the income of such benefice or curacy; but they may obtain a sequestration of the profits for the benefit of the creditors. Neither are the assignees entitled to the pay, half-pay, pension, or other emolument, of any person who is, or has been, in the army, navy, or civil service of the Government, or of the East India Company; but the Court may order, subject to the approval of the heads of public offices, a portion of such pay, half-pay, pension or emolument, to be appropriated to the liquidation of the debts of the insolvent. On the day appointed for the bearing of the petition, any creditor may oppose the discharge of the prisoner, and, for that purpose, put such questions and examine such witnesses, as the Court shall admit, touching the matters contained in the petition and schedule. If the Court deem the opposition frivolous and vexatious, it may award such costs as may appear just and reasonable; but if it be shown to the satisfaction of the Court, that the prisoner has been guilty of some fraudulent conceal-

ment, the opposing creditor is entitled to the costs of opposition. Notice of the time for hearing the petition is to be given to creditors whose debts amount to £5, and to be advertised in the Gazette. If it appear on the hearing that the proof of notice to the creditors is imperfect, or some other matter has been omitted to be done, the commissioners may proceed to adjudicate, and make the discharge of the prisoner conditional on the performance of the forms omitted, without subjecting him to the bardship of having his petition absolutely adjourned to a future occasion. In case the prisoner is not opposed, and the Court is satisfied with his schedule, it may order his immediate discharge from custody, for any period not exceeding six months from the time of filing his petition. But if the prisoner has destroyed his books, or falsified or made false entries, or withheld entries from them, or otherwise acted in a fraudulent manner towards his creditors, or wilfully omitted anything in his schedule, he may be imprisoned for any term not exceeding three years; or, when the prisoner has contracted debts fraudulently by means of a breach of trust, or put creditors to any unnecessary expense, or incurred debts by means of any false pretence, or without having any probable expectation, at the time when contracted, of paying them; or be indebted for damages for criminal conversation, seduction, or breach of promise of marriage; or for damages in any action for malicious prosecution, libel, slander, or trespass, the Court may extend the imprisonment to two years. When the prisoner is not discharged, the Court may, on application for that purpose, order the creditor at whose suit he is detained, to pay any sum not exceeding four shillings weekly; and, in default thereof, he is to be discharged. Before adjudication on the petition, the Court shall require of the insolvent to execute a warrant of attorney, empowering the Court to enter up judgment against him for the amount of the debts unpaid. And when the insolvent is of sufficient ability to pay such debts, or is dead, leaving assets for that purpose, the Court may permit execution to be taken out, upon the judgment against the property of the prisoner acquired after his discharge; and such proceeding may be renewed till the whole of the debts, with costs, due by the prisoner shall be paid and satisfied. No person after the judgment entered up is liable to imprisonment for any debt, to which the adjudication of the Court extended. Nor can execution, except upon the judgment under the Act, issue against him for debt contracted prior to his confinement; but he may be proceeded against for a debt which could not be enforced at the period of his discharge. If a prisoner, after discharge, become entitled to any stock in the public funds, or having property which cannot be taken into execution under the judgment, and refuse to give up the same, then he may, on complaint of the assignees, be remanded into custody. When an order for the discharge of the prisoner has been issued by mistake, the Court may

amend or revoke it, and if necessary, recommit him to custody. An insolvent after his discharge may, on the application of an assignee to the Court, be again examined as to the estate and effects set forth in his schedule, and, if he refuse to appear, or to answer questions on oath, he may be re-committed. Persons wilfully omitting, with intent to defraud creditors, anything in the schedule so sworn to, are guilty of a misdemeanour, and liable to be imprisoned and kept to hard labour, for any period not exceeding three years. No uncertificated bankrupt, nor any person having had the benefit of this or any former Insolvent Act, can have it a second time within five years, unless three-fourths in number and value of the creditors assent to it, or unless it appear to the Court that such person since his bankruptcy, or his discharge, has done his utmost to pay all just demands, and that the debts which he has subsequently incurred have been unavoidable, from inability to acquire subsistence for himself and family. Married women are entitled to the benefit of the Act, and may petition the Court, on executing a special conveyance and assignment.

INSURANCE, FIRE.—The advantages of fire insurance are well known. By it a tradesman or private individual can, by the payment of an annual sum proportioned to the risk, secure himself against loss in the event of his place of business or dwelling-house, or their contents being destroyed by fire. It is almost impossible to form a correct classification of the various risks undertaken. They are, however, generally divided into *common*, *hazardous*, *doubly hazardous*, and *special*—the rates varying from 1s. 6d. for £100 per annum for a private first class dwelling-house, to 42s. for £100, for a sugar refining or drying stove. The more fragile and costly contents of a house, such as china, glass, mirrors, and pictures, are charged at a higher rate of premium than the ordinary articles of household furniture; as being more susceptible of damage in the event of fire; whilst books of accounts, written securities, bills, bonds, ready money, and gunpowder, are deemed *uninsurable*. In addition to the premium charged by the insurance office, there is also a government duty payable of 3s. per cent. per annum. The conditions on which an insurance is granted are in all cases printed upon the policy, and form a part of the contract, being in general so well defined as seldom to require submission for judicial interpretation. Candour is imperative on the part of all persons proposing for insurance. Any misrepresentation in describing the building, or goods, or the process of manufacture carried on, whereby the same may be charged at a lower rate of premium than they otherwise would be, invalidates the policy; and if any alteration be made in the state of the building or process of manufacture after the insurance is effected, the insured is required to give due notice thereof to the insurers, otherwise he forfeits all right of recovery under his policy. The party effecting an insurance, must have an interest in the prop-

erty insured, to enable him to establish a claim against the insurance company; and a trustee, mortgagee, reversioner, factor, or agent is held to have sufficient interest to effect a policy of insurance, provided the nature of such interest be distinctly specified at the time of effecting the insurance. An insurance on the same property in any other office must be named in, or indorsed on, the policy, and in the event of loss, each office pays a rateable portion thereof. It frequently occurs, however, that various parties have separate interests in the same property, in which case, each may insure his own interest without communication with the others. A separate sum must be insured on each building, and on the contents of each. But goods in the upper part of the house, will be included with goods in the lower part of the same building, unless the policy is expressly limited to the whole of the goods on the upper part. The offices generally hold themselves liable for loss occasioned by lightning and gas explosions; also for losses occasioned by incendiaries, the offices having a right of recovery from the county, in the event of a conviction of the incendiary. There is a general exemption from liability in the case of fire occasioned by invasion, foreign enemy, civil commotion, riot, and any military or usurped power. Policies of insurance may be effected for any period. If for a year or a term of years, fifteen days grace are usually allowed for the payment of the premium. A policy of insurance is not in its nature assignable, nor can it be transferred without the express consent of the office. When, however, any person dies, his interest remains in his executors, or administrators respectively, who succeed or become entitled to the property, provided such representatives respectively procure their right to be indorsed on the policy. The method of effecting an insurance is extremely simple, and need only occupy a few minutes: a person desiring to insure gives the particulars to any one of the clerks in the office, the amount payable for the first year's premium is at once calculated, a receipt is given for the same, and although the policy is not then handed over, still the insurance may be considered to be virtually effected from that moment. When a fire occurs, and the property is only partially destroyed, a claim has to be sent in by the insured, in which the articles burnt or otherwise injured have to be enumerated, and their separate value estimated as nearly as possible. In making out the claim, particular regard should be made to truth and honesty, and all mis-statements should be carefully guarded against. Many offices make it one of their conditions that the statement of loss should be supported by the oath or affirmation of the claimant; declaring at the same time that if any false swearing, fraud, collusion, or wilful mis-statement shall take place, either by the assured, or on his behalf, the whole right of recovery shall be forfeited. In the majority of cases, a fire does not involve a total loss, and the insurance company is liable for the actual amount of loss or damage sustained—

not exceeding the sum insured by the policy, which is the maximum, beyond which no claim can extend. The offices generally reserve to themselves the power of reinstatement, instead of the payment of the amount claimed. There are instances where persons are their own insurers, thus, where the rate of insurance is very heavy, the sum paid in premiums and the interest thereon, would in a very few years amount to as much as the value of the property insured. A calculation is made to this effect, and if no fire occurs between the date of the supposed insurance, and the time that the premiums due and the interest thereon amounts to the value of the property, it is clear that that amount of profit has been made, inasmuch as had the premiums been paid to the office, the amount would have been expended although the property had suffered no loss.

INSURANCE, LIFE.—The principle of life assurance is to secure to the insurer or his representatives, the payment of a certain sum in the event of death or some other contingency stipulated for. There are various methods of effecting insurances, dependent on the object in view, or some personal circumstance in connection with the insurer. *Ordinary life assurance* is the stipulation for a certain sum to be paid on the death of the insurer, whenever that event may occur; the assurance, therefore, extends over the whole term of life. The amounts of premium or annual payments for the sum of £100, will depend entirely upon the age of the person at the time the insurance is effected, and whether he wishes to participate in the bonus, or the profits of the company; or assures on the withdrawal or non-withdrawal principle. For definite information and instruction on these points, persons desirous of effecting an insurance should consult the prospectus and tables of the particular office with which he resolves to do business. The insurable principle, however, with all offices is, to increase the amount of the premium as age advances. Thus, for example, a person at the age of twenty would have to pay a premium of £1 17s. 9d.; at thirty, £2 8s. 2d.; at forty, £3 5s. 10d.; at fifty, £4 12s. 9d.; at sixty, £7 5s. 6d. It is, therefore, important for a person to effect an insurance on his life as early as possible; because, although he himself grows older, the premium always remains the same. *Deposit Assurance* is the method whereby a given amount is secured, should death occur within a specified number of years; a plan of great service, whereby a guarantee is required for payment of temporary loans in case of premature death. This method is peculiarly adapted to members of building societies, small tradesmen in pecuniary difficulties, and others where temporary loans are required for special purposes. Example:—If a person twenty years of age should deposit the sum of £10 yearly for ten years, the insurance will amount to £147 8s. The amount insured becomes payable at the death of the insurer, together with the amount of the deposit in the hands of the company at death. Persons may thus create a considerable insurance on their own lives,

and have at their command the capital deposited for such purpose, when they require it; thus enjoying the advantage of a savings bank and life insurance. *Endowment Insurance* provides for two important contingencies; the securing of a positive provision for the insurer's family while in life, and guaranteeing the same in the event of death. By this system, parents of limited means are enabled to provide a sum sufficient for the superior education of their children, or at a particular period in life to assist them to start in business. Example:—A parent, by the annual payment of £3 9s. 6d. for his child two years of age, may secure for him or her the sum of £100 on attaining the age of twenty-one. *Reversionary Insurance* is where the payment of a stipulated sum is guaranteed to a given person on the death of another. It is an insurance effected by A. on the life of B., payable to A. on the death of B. This mode of insurance is subject to a variety of conditions, and is capable of application to innumerable cases. *Joint Lives Insurance* is that which is effected on two or more lives for the benefit of the last survivor. The following are some of the illustrations of this particular method—1st. On payment of £3 2s. 11d. annually, during the joint continuation of two lives, aged thirty and twenty, the sum of £100 will be received upon the death of either of these lives. 2d. Suppose a husband to be thirty-five and his wife thirty, an annual payment of £3 15s. 7d. will secure to the survivor the sum of £100. 3d. In the case of three brothers, aged respectively twenty, thirty, and forty, £100 will be secured to the last survivor by an annual payment of 19s. 8d. *Accidental Death Insurance* is designed to insure a fixed sum against every description of death by accident or violence; and combined with this, at the option of the insured, a proportionate amount of compensation in certain cases of personal injury. This description of insurance is applicable to all classes of society, but more especially to such persons as are engaged in pursuits and occupations of a more than ordinary hazardous nature. These risks are classified into three descriptions—1st. Ordinary risks, comprising the gentry, professional men, farmers, clerks, commercial travellers, shopkeepers, and other tradesmen under sixty years of age. 2d. Builders, sawyers, masons, house painters, printers, labourers, porters, carters, coopers, millers, policemen, ostlers, coachmen, individuals engaged in engineering works, docks, tunnels, &c. 3d. All whose occupations are particularly hazardous to life, as boatmen, sailors, miners, railway engine-drivers, stockers, and guards. First example: A single payment of £10 10s. will purchase for any person comprised in 1st class £1000 in the event of death by accident; or an annual payment will have the same effect so long as payments are continued. Second example: An annual payment of £1 5s. will ensure the sum of £500 to all comprised in 2d class. Third example: By the payment of 8s. a year the working man may insure himself, in the event of an accident, 10s. a week as long as he is disabled, and £1 for medical attend-

ance, and £50 payable to his representatives should the accident terminate fatally. *Maritime Passengers' Insurance* applies to all classes of persons travelling by water, whether journeying by steam or sailing vessel, against death or personal injury arising from accident. Compensation will be made in all cases of personal injury, and payment of the amount insured, should death occur through accident. Insurance can be effected for the journey or voyage, by the year, or one payment made for the insurance for the whole life. This method is principally applicable to seamen, fishermen, boatmen, and all others liable to marine casualties, and can be effected in sums varying from £5 to £100. It is also extended to officers in her Majesty's and the East India Company's service, masters and mates in the mercantile marine, and to pilots. Example:—A passenger proceeding to Calcutta, Australia, Port Natal, New York, or California, may insure his life and personal safety against sea accident, for £200, on paying a premium of 5s. Example 2:—To provide against all risk by ocean or river, permitting the insured to proceed to any part of the world during a period of twelve months, for £100, 3s. 6d.; £500, 17s. 6d.; £1000, £1 15s. premium. *Railway Passengers' Insurance* is a mode of life insurance which secures the payment of a sum of money, in the event of loss of life or personal injury happening to them while travelling by railway. To facilitate such insurances, the clerks at all railway stations are authorized to issue insurance tickets at the time that the insurer pays his railway fare. The terms on which these insurances are effected are as follows:—To insure £1000, if a first class passenger, 3d.; £500, if a second, 2d.; £200, if a third, 1d. To insure £1000, with the option of travelling in any class carriage, a premium of 10s. is paid for three months; 16s. for six months; 20s. for twelve months.

Having thus given an account of the various kinds of life insurance, the next important matter is to point out how ordinary life insurance may be effected. Before entering into a transaction of this kind, the intending insurer should consider well the nature of the contract to which he is to become a party, and to understand fully the principles upon which it is to be conducted. It should be remembered that this is a contract for life; and when the insurer enters into it he binds himself to adhere to the rules and regulations laid down, and any deviation on his part will, ultimately, render the agreement null and void. By this means he forfeits all the benefits guaranteed and stipulated by the contract itself. The first thing which should be attended to in the selection of an office is its well known respectability and standing. Among so many offices with which business may be safely transacted, it would be invidious to specify any in particular; as a rule, however, the insurer should select an old and long-established company in preference to a new one, for although the latter may surmount those obstacles which young insurance offices have to contend with, and punctually meet their engagements, the first named offices, having passed

through the stage of probation, are obviously in a better position to satisfy the demands made upon them. As there is great competition among insurance offices, new concerns, in order to secure business, are in the habit of tempting insurers, first, with a comparatively low scale of premiums; and, secondly, with the prospect of extraordinary advantages; but these present benefits should be regarded as of minor importance, as compared with the consideration of the security for the future. Care should also be taken to insure with a company whose policies are indisputable; for where this is not the case some unforeseen or unavoidable accident, or some technical objection may be seized hold of by the company as a pretext for repudiating their liability to payment. The amount to be insured can only be regulated according to the pecuniary resources of the insurer himself; and on no account should he be induced to enter into an obligation to pay a larger amount of premium than there is a reasonable prospect of his being able to continue. The most prudent course is, when any doubt on this head exists, to insure in the first instance for a less sum, and increase the amount in proportion to the augmentation of income. An important consideration in the negotiation of a life insurance, and one which cannot be too deeply impressed upon the mind is, that the basis of the contract or agreement is founded upon the insurer's own personal statement, as made in the proposals furnished by himself. It is to be feared that in many instances answers are given to the questions put by the office, which are at variance with the fact, and this is done not so much with a desire of wilfully suppressing the truth, as from not having duly considered the importance of the question, and the consequences which may result from the answer. It should be borne in mind, therefore, that any false statement respecting the health, habits, age, or other personal matters, are sufficient to invalidate the policy. Thus there are instances upon record where persons have died of a certain disease, which attacked the person so afflicted on several occasions during his life, in a milder form. When the question has been put, whether the intending insurer has ever been attacked with the specific malady, the answer has been, "Never." But the circumstances of death having awakened the suspicions of the insurance office, inquiries have been set on foot, and the fact has come to light that the deceased was attacked by, and treated for, this complaint on several occasions during his lifetime. The policy has been accordingly vitiated. It is possible that an error may be committed by a non-compliance with the rules laid down, as by an actual and fraudulent intention by misrepresentation. But to guard against such liabilities, the state of the law upon this point is defined as follows: "Insurance is a contract upon speculation, and therefore the special facts upon which the risk is to be completed lie chiefly in the knowledge of the insurer only. The office insuring, trusts in his statement, and proceeds upon the confidence that he does not keep back any

circumstances within his knowledge, to mislead the office into a belief that they do not exist. By the suppression of such facts, although happening through a mistake, without any fraudulent intention, still the office is deceived; and being compelled to run a risk really different from the risk understood and intended to be run at the time of the agreement, the policy is thereby rendered invalid." The contract is equally void whether the misrepresentation is made on the part of the insurer, or of his agents, or of any other party concerned on his behalf, about the insurance. The foregoing considerations resolve themselves into this common sense mode of action. Instead of making one error, in keeping back what ought to be stated, rather pay the additional charge of premium, if it be required, by telling the truth. In so doing, all danger is avoided of rendering the policy of none effect. It should be remarked, that in order to avoid error or misrepresentation, the whole of the insurance offices are remarkably plain and explicit in their directions and instructions in their printed forms of proposals. These printed forms may be obtained by application at the insurance office; but, as many persons may be so situated as not to be able to apply for them, a copy of the questions usually put is given herewith:—1. Name, residence, and occupation or profession, of the person whose life is to be insured. 2. Place and date of birth. 3. Age next birthday. 4. Whether he is now in good health. 5. Whether his habits are sober and temperate. 6. Whether he has ever been afflicted with apoplexy, palsy, fits, convulsions, spitting of blood, habitual cough, asthma, palpitation of the heart, or consumption. 7. Whether he has ever been subject to rheumatism, gout, insanity, rupture, or any other disease tending to shorten life; if so, its nature and extent to be stated. 8. Whether any member of his family has died of either of the diseases named in the foregoing queries—that is, his father, mother, brother or sister. 9. Whether he has had the small-pox or cow-pox from vaccination. 10. Whether he has ever resided abroad, where, for what period, and how long since. 11. Is he insured in any other office? if so, in what office, and the date when the insurance was effected. 12. Has his life been declined by any other office? if so, state the name of the office and the date when it was declined. 13. Whether he is, or has ever been, employed in the military, naval, or merchant seaman's service. 14. Reference to two respectable parties who are competent to afford information as to his state of health, or mode of life, or his medical adviser, if he have one. 15. Sum proposed to be insured. 16. Whether for the whole life, or a term of years. 17. Whether with participation of profits. The following declaration usually accompanies the proposal paper, and also requires to be subscribed: "Having an interest in the life of the above named

, to the full amount of the said sum of _____, I hereby propose to effect an insurance on my own life, with _____ society;

and I do hereby declare that I have not withheld any information which is calculated to influence the decision of the directors, as to the illegibility of the life proposed for insurance. And I do further agree, that the insurance hereby proposed, shall not be binding on the society until the amount of premium demanded shall have been paid." The proposal paper being thus filled up, is forwarded to the office and an intimation is shortly afterwards received by the intending insurer that his proposal has either been declined or accepted. In the latter case, a day is named for the insurer to wait upon the medical officer of the company, in order to be examined. This done, a report is made to the directors, and a second intimation is received by the proposed insurer, stating that his life is accepted, and requesting of him to attend at the office, for the purpose of completing the transaction, and paying the amount of premium, fees, &c., usual in such cases. The intervals at which the premiums are made payable, are generally regulated at the option of the insurer quarterly, half-yearly, and yearly. The punctual payment of the premiums as they fall due is a matter of the greatest importance; because when this is omitted to be done, the contract is at once violated; the office is no longer liable; and the policy becomes so much waste paper. To allow for contingencies, a certain interval beyond the precise day on which the premium falls due is usually granted, these are termed "days of grace," extending to fourteen, twenty-one, or thirty; during which time, if the premium be paid, the policy still holds good. And here a word of warning is necessary against procrastination; for the records of life insurance show, that innumerable instances have occurred, when policies have been forfeited by the lapse of a day or even a few hours. Therefore, although these days of grace are allowed, it is unwise to take habitual advantage of them, because it is impossible to say what accident may arise to prevent the policy holder carrying into effect that which he proposes to himself to do within the given time. The policy now being delivered into the hands of the insured person, represents a certain value, and the value is all the more enhanced by the convertible nature of the policy. Thus a policy may be assigned during the lifetime of the insurer to any person whom he deems fit; the amount which it represents may be willed to any person just as any other tangible property may be. It should also be known that loans may be raised on policies; and most offices will lend the value of a policy at a moderate rate of interest. Finally, a policy may be surrendered, that is to say, that if at any time the policy holder find himself in a position which debars him from keeping up the payment of the premium, or from any other cause, the office in which the insurance was effected, will take back the policy, and return a certain portion of the premiums paid. This is a material point, and one well worth knowing, for there are doubtless cases where the policy

holder finding himself unable to pay the premium, has abandoned the policy in despair, without even once inquiring whether some sort of compensation did not exist, such as is here indicated. The next point is to ascertain the line of conduct which is to be pursued, to obtain payment of the policy, when the person whose life was insured dies. When that event occurs a notification is required to be sent to the office. The cause of death must also be certified and other surrounding circumstances, which should be stated as accurately as possible. The primary object, however, in requiring the cause of death to be stated is, in order to ascertain that the particular disease of which the person died did not exist when the insurance was effected—that is, within the knowledge of the party; and that the party did not die by his own hand or the hand of justice. When the explanations given, prove satisfactory, the amount of the policy is paid within a stated time after the death of the insurer. Books: *Currie's Popular Essay*, 2s. 6d.; *Gray's Tables*, 10s. 6d.; *Burt's Essay*, 7s. 6d.; *Grith's Treatise*, 1s.; *Pocock on Life Insurance*, 7s.; *Hutchinson's Popular View*, 2s. 6d.; *Bunyon's Treatise*, 21s.; *Dowdeswell's Law*, 6s.; *James's Treatise*, 15s.; *Young's Guide*, 1s.; *Eagle's Manual*, 5s. 6d.; *Todd's Tables*, 21s.; *Laurence's Treatise*, 1s.

INSURANCE, VARIOUS.—On the same principle as life and fire insurance, there are also various kinds of guarantee against peculiar risks and contingencies, among which are the following: *Marine insurance* for ships, and for merchandise transported by sea. *Insurance on emigrants*, covering the risk of voyages, localities, gold diggings, &c. *Insurance against specific diseases*, such as blindness, insanity, paralysis. *Insurance of plate glass windows*. *Insurance against losses by hail-storms*. *Insurance against defective titles*, where the title, though good for holding, is unmarketable, by reason only of such defects. *Insurance of the value of mortgaged property*. *Insurance of debts*. *Insurance of rents*, securing punctual payment whether the property be or be not occupied. *Insurance against loss by theft*, for the efficient prosecution of the offenders; and for the detection and prevention of crime. *Insurance of live stock*, for the purpose of securing the farmer against the diseases and casualties to which live stock is exposed.

INTEREST.—The annual sum or rate per cent. which the borrower of a capital agrees, or is bound, to pay to the lender for its use. When a loan is made, it is usual to stipulate that the interest upon it should be regularly paid at the end of every year, half-year, &c. A loan of this sort is said to be at simple interest. It is of the essence of such loan, that no part of the interest accruing upon it should be added to the principal to form a new principal, this is called *simple interest*. Sometimes, however, money or capital is invested so that the interest is not paid at the periods when it becomes due, but is progressively added to the principal; so that at every term a new principal is formed, consisting of the original principal, and the successive accumulations of interest upon

interest. Money invested in this way is said to be placed at *compound interest*. Interest is estimated at so much per cent. per annum, or by dividing the principal into 100 equal parts, and specifying how many of these parts are paid yearly for its use. Thus 5 per cent., or 5 parts out of 100, means that £5 are paid for the use of £100 for a year, £10 for the use of £200, £2 10s. for the use of £50 for the same period, and so on. Suppose it is required to find the interest of £210 13s. for 3½ years at 4 per cent. simple interest. In this case we must first divide the principal £210 13s., into 100 parts, 4 of which will be the interest for one year, and this being multiplied by 3½ will give the interest for 3½ years. But instead of first dividing by 100, and then multiplying it by 4, the result will be the same, and the process more expeditious, if we first multiply by 4 and then divide by 100. Thus—

Principal	£	s.	
	210	13	
Rate per cent.		4	
	<hr/>		
	£	s.	d.
100)	8,42	12	(8 8 6¼ = 1 yrs. inter.
	20		3½
	<hr/>		
	8,52	25	5 6¾ = 3 yrs. inter.
	12	4	4 3 = ½ yrs. inter.
	<hr/>		
	6,24	£29	9 9¼ = 3½ yrs. inter.
	4		
	<hr/>		
	96		

It is almost superfluous to observe that the same result would have been obtained by multiplying the product of the principal by the number of years, and then dividing by 100. Hence, to find the interest: By this table may be readily ascertained the number of days from any given day in the year to another. For instance, from the 1st of January to the 14th of August (first and last days included), there are 226 days. To find the number, look down the column headed January, to No. 14, and then look along in a parallel line to the column headed August, you find 226, the number required. To find the number of days between any other two given days, when they are both after the first of January, the number opposite the first day must, of course, be deducted from that opposite to the second. Thus, to find the number of days between the 13th of March and the 19th of August, deduct from 231—the number in the table opposite to 19 and under August—72, the number opposite to 13 and under March, and the remainder, 159, is the number required, last day included. In leap year, one must be added to the number after the 28th of February. When interest instead of being simple, is compound, the first year's or term's interest must be found, and being added to the original principal upon which interest is to be calculated for the second year or term; and the second year's or term's interest being added to this last principal, makes that upon which interest is to be calculated for the third year or term; and so on for any number of years. To find the interest of

£100 for any other term, as 1 year and 278 days, at $4\frac{1}{2}$ per cent. Take the sum for the several days as in the following example:

	£	s.	d.
Interest for 1 year	4	10	0
" 200 days	2	9	$3\frac{1}{2}$
" 70 "	17	$3\frac{1}{2}$	
" 8 "	1	11	

Interest required £ 7 18 6

For any other sum than £100. First find for £100 as above, and take it so many times or parts as the sum is of £100. Thus, to find for £355 at $4\frac{1}{2}$ per cent., for 1 year and 278 days.

First, 3 times the above sum:—

	£	s.	d.
(for £300) =	24	15	$8\frac{1}{2}$
$\frac{1}{3}$ (for £50) =	3	19	$3\frac{1}{2}$
$\frac{1}{10}$ (for £5) =	7	11	

Interest on £355 = £28 2 10 $\frac{1}{2}$

In calculating interest on accounts current, it is necessary to state the number of days between each receipt or payment, and the date (commencing the 31st of December) to which the amount current is made up. Thus £172 paid on the 15th of September, being interest to the 31st of December, 107 days. The amount of such interest may then be calculated by the aid of the following table.

Table for ascertaining the Number of days from any one day in the year to any other.

	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.
1	32	60	91	121	152	182	213	244	274	305	335	
2	33	61	92	122	153	183	214	245	275	306	336	
3	34	62	93	123	154	184	215	246	276	307	337	
4	35	63	94	124	155	185	216	247	277	308	338	
5	36	64	95	125	156	186	217	248	278	309	339	
6	37	65	96	126	157	187	218	249	279	310	340	
7	38	66	97	127	158	188	219	250	280	311	341	
8	39	67	98	128	159	189	220	251	281	312	342	
9	40	68	99	129	160	190	221	252	282	313	343	
10	41	69	100	130	161	191	222	253	283	314	344	
11	42	70	101	131	162	192	223	254	284	315	345	
12	43	71	102	132	163	193	224	255	285	316	346	
13	44	72	103	133	164	194	225	256	286	317	347	
14	45	73	104	134	165	195	226	257	287	318	348	
15	46	74	105	135	166	196	227	258	288	319	349	
16	47	75	106	136	167	197	228	259	289	320	350	
17	48	76	107	137	168	198	229	260	290	321	351	
18	49	77	108	138	169	199	230	261	291	322	352	
19	50	78	109	139	170	200	231	262	292	323	353	
20	51	79	110	140	171	201	232	263	293	324	354	
21	52	80	111	141	172	202	233	264	294	325	355	
22	53	81	112	142	173	203	234	265	295	326	356	
23	54	82	113	143	174	204	235	266	296	327	357	
24	55	83	114	144	175	205	236	267	297	328	358	
25	56	84	115	145	176	206	237	268	298	329	359	
26	57	85	116	146	177	207	238	269	299	330	360	
27	58	86	117	147	178	208	239	270	300	331	361	
28	59	87	118	148	179	209	240	271	301	332	362	
29	8	119	149	180	210	241	272	302	333	363		
30	9	120	150	181	211	242	273	303	334	364		
31	10	121	151	182	212	243	304			365		

To find the interest of any sum at any rate per cent. for a year, multiply the sum by the

rate per cent. and divide the product by 100. To find the interest of any sum for a number of years, multiply its interest for one year by the number of years; or, without calculating its interest for one year, multiply the principal by the rate per cent. and that product by the number of years, and double the last product by 100. When the interest of any sum is required for a number of days, multiply the interest of a year by them, and divide by 365. Thus, to find the interest of £210 for four years and seven months and twenty-five days, at $4\frac{1}{2}$ per cent.

Principal..... £210

Rate per cent..... $4\frac{1}{2}$

840

105

Interest for 1 year £9 } $45 \times 4 = £37.80$, do.
for four years.

Interest for 4 years = £37 8000

6 mths. = $\frac{1}{2}$ of 1 yr. = 4 7250

1 mth. = $\frac{1}{6}$ of 6 mths. = 7875

25 days = 6472

£43 9597 = £43 19s. 2d.

9.45×25

The interest for 25 days is = 6472,

365

that is, it is equal to the interest for a year,

25

multiplied by the fraction — Division by

365.

100 is performed by cutting off two figures to the right.

A very easy and general method of computing simple interest, is by means of the following concise but comprehensive table.

Days.	3 per cent.	3 $\frac{1}{2}$ per cent.	4 per cent.	4 $\frac{1}{2}$ per cent.	5 per cent.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 0 1 $\frac{1}{2}$	0 0 2 $\frac{1}{4}$	0 0 2 $\frac{1}{2}$	0 0 3	0 0 3 $\frac{1}{2}$
2	0 0 3	0 0 4 $\frac{1}{2}$	0 0 5	0 0 6	0 0 6 $\frac{1}{2}$
3	0 0 5 $\frac{1}{2}$	0 0 6 $\frac{3}{4}$	0 0 7 $\frac{1}{2}$	0 0 8 $\frac{1}{2}$	0 0 9 $\frac{3}{4}$
4	0 0 7 $\frac{1}{2}$	0 0 9	0 0 10 $\frac{1}{2}$	0 0 11 $\frac{1}{2}$	0 0 11 $\frac{3}{4}$
5	0 0 9	0 0 11 $\frac{1}{4}$	0 0 11 $\frac{1}{2}$	0 0 12 $\frac{1}{2}$	0 0 14 $\frac{1}{2}$
6	0 0 11 $\frac{1}{2}$	0 0 13	0 0 13 $\frac{1}{2}$	0 0 15	0 0 17 $\frac{1}{2}$
7	0 0 13 $\frac{1}{2}$	0 0 14 $\frac{1}{2}$	0 0 16 $\frac{1}{2}$	0 0 18 $\frac{1}{2}$	0 0 21
8	0 0 15 $\frac{1}{2}$	0 0 16 $\frac{3}{4}$	0 0 19	0 0 21 $\frac{1}{2}$	0 0 24 $\frac{1}{2}$
9	0 0 17 $\frac{1}{2}$	0 0 18 $\frac{1}{2}$	0 0 21 $\frac{1}{2}$	0 0 24	0 0 27
10	0 0 19	0 0 21	0 0 23	0 0 26	0 0 30
11	0 0 21	0 0 23	0 0 25	0 0 28	0 0 33
12	0 0 23	0 0 25	0 0 27	0 0 30	0 0 36
13	0 0 25	0 0 27	0 0 29	0 0 32	0 0 39
14	0 0 27	0 0 29	0 0 31	0 0 34	0 0 42
15	0 0 29	0 0 31	0 0 33	0 0 36	0 0 45
16	0 0 31	0 0 33	0 0 35	0 0 38	0 0 48
17	0 0 33	0 0 35	0 0 37	0 0 40	0 0 51
18	0 0 35	0 0 37	0 0 39	0 0 42	0 0 54
19	0 0 37	0 0 39	0 0 41	0 0 44	0 0 57
20	0 0 39	0 0 41	0 0 43	0 0 46	0 0 60
21	0 0 41	0 0 43	0 0 45	0 0 48	0 0 63
22	0 0 43	0 0 45	0 0 47	0 0 50	0 0 66
23	0 0 45	0 0 47	0 0 49	0 0 52	0 0 69
24	0 0 47	0 0 49	0 0 51	0 0 54	0 0 72
25	0 0 49	0 0 51	0 0 53	0 0 56	0 0 75
26	0 0 51	0 0 53	0 0 55	0 0 58	0 0 78
27	0 0 53	0 0 55	0 0 57	0 0 60	0 0 81
28	0 0 55	0 0 57	0 0 59	0 0 62	0 0 84
29	0 0 57	0 0 59	0 0 61	0 0 64	0 0 87
30	0 0 59	0 0 61	0 0 63	0 0 66	0 0 90
31	0 0 61	0 0 63	0 0 65	0 0 68	0 0 93

N.B.—This table contains the interest of £100 for all the several days in the first

column, on the several rates of 3, 3½, 4, 4½, and 5 per cent. in the other five columns.

The following table will repay the trouble of committing it to memory, as showing the amount per pound, stating what each rate of interest bear.

2½ per cent. is	s. d.	0 6	in the pound.
3	0	7½	"
4	0	9¾	"
5	1	0	"
6	1	2½	"
7½	1	6	"
10	2	0	"
12½	2	6	"
15	3	0	"
17½	3	6	"
20	4	0	"
22½	4	6	"
25	5	0	"

INTEREST, LEGAL OPERATION OF.—

There is now no law debarring a person from taking all the interest he can on money lent. Where, however, the security consists of land or freehold estates, there is little difficulty in obtaining money at five per cent., whilst the interest charged in other cases, is regulated according to the value and taughthiness of the security. But to entitle the lender to more than five per cent., it is necessary that the extra and agreed amount should be stated on the face of the document securing the debt and interest. The payment of interest on a debt, will take the same out of the Statute of Limitations. Interest is, in general, recoverable, in addition to the principal sum upon an express promise, or where a contract may be implied from circumstances, as the particular mode of dealing by the parties, or the usage of trade. Interest is recoverable where a bond, bill of exchange, or promissory note has been given. But interest is not generally recoverable upon a sale of goods, or upon money lent, or money paid, or money had and received, or upon the balance of an account stated. But it is enacted: That upon all sums certain, payable at a certain time or otherwise, the jury, in the trial of any issue, or on any inquiry of damages, may allow interest not exceeding the current rate, from the time when such debts and sums certain were payable, if such debts or sums be payable by virtue of some written instrument at a certain time; or, if payable otherwise, then from time to time when demand of payment shall have been made in writing, so as such demand shall give notice to the debtor, that interest will be claimed from the date of such demand until the time of payment; provided that interest shall be payable in all cases in which it is now payable by law. The jury may give damages in the nature of interest over and above the value of the goods at the time of conversion or seizure, in actions of trover or trespass, and over and above the money recoverable in actions on policies of insurance. In a long unsettled partnership account, rendered intricate by the neglect of a party, he shall have no interest on the balance when settled. Executors and trustees are frequently charged

with interest in equity, where they have withheld money from parties to whom it is due, or unnecessarily called in sums out on good security. In such cases they are generally made to pay five per cent.; and an executor has been charged with compound interest at that rate. In case of a vested legacy, due immediately, and charged on land, or money in the funds, which yields an immediate profit, interest shall be payable thereon from the testator's death; but if charged only on the personal estate, which cannot be immediately got in, it shall carry interest only from the end of the year after the death of the testator.

INTERMITTENT FEVER, when occurring as a spontaneous disease, is a fever consisting of paroxysms of fever, between each of which there is a perfect period of intermission without fever—each paroxysm of fever being divided into three distinct and well-marked stages, called the cold, hot, and sweating; an intermittent fever, consisting of alternate paroxysms of the three stages and intervals of repose, or except for the debility left by the attack, of health. These morbid periods of three stages sometimes occur only once in twenty-four hours, occasionally twice, every other day, or every forty-eight hours, according to the length of the remission of the ague, being called quotidian, twenty-four hours; tertian, forty-eight; and quartan, seventy-two hours: besides these there are further complications as to the recurrence of the fits; for which, see article, "Fever," under which head will be found the descriptive chain of symptoms. The treatment of intermittent fever differs with each stage or fit; in the cold stage, or congestion, or collapse, the blood, having been driven from the surface, and collecting in a state of plethora in all the vital organs, produces a pale, shrunken appearance of the body and countenance, great cold, shivering, pain and difficulty of breathing, demanding a mode of treatment that shall unload the gorged organs, restore the blood to the surface, and by equalising the circulation, cut short the duration of the fit. To effect this object, stimulants and the hot bath are the chief agents to rely upon. In the hot stage into which the disease, after a longer or shorter time, naturally glides, and which is the state of re-action, the cold pallor of the body and its shrunken appearance is changed for a dry burning heat that renders turgid, flushed and swollen, every part of the body, causing severe pains in the head, ringing in the ears, and other acute symptoms from the distended state of the vessels, and their pressure on the brain. As in the cold stage, nature, if unassisted, would, after a certain interval of time, relieve the intolerable heat, thirst, and pain of this condition, by sweating: the medicinal means employed to cut short the hot stage and induce the third, are cooling drinks, cold aspersions of the body, diaphoretics, and other antiphlogistic remedies. In the third or sweating stage, when a dense perspiration, like a summer shower on the parched earth, breaks out, all the scorching symptoms of a raging fever give way before the relaxing

burst of moisture, which is so copious, as seemingly to expel, by this rain of perspiration, every germ of the disease, leaving the patient free from all fever, but so exhausted as to be, on some occasions, scarcely able to speak, so excessive has been the discharge. In this stage, all that can be done is to keep the room cool, and the body frequently wiped, and when the stage is over, a stimulant, and perfect repose, so that the patient may sleep. It is, however, during the hours of remission, or within an hour of the time of the expected return of the paroxysms, that the remedial agents are to be employed, the object being to break the diseased punctuality of the fits, and having once broken their order, the cure is more easy and certain. To effect this, the system is to be first cleared by one or two full doses of some aperient medicine, and quinine, which is the chief dependence of the physician, administered in a dose sufficiently large to arrest, by anticipation, the morbid condition of the first stage, by postponing or mitigating the cold fit; if the hot bath is then used, the second stage may be avoided, by exciting the last or sweating, after which, tonics and stimulants are to be employed to restore the strength, and an hour before the recurrence of the cold fit, again exhibit the large dose of quinine, and so in rotation till the fever is conquered; the interval between the end and beginning of each paroxysm being employed in building up the patient's strength by wine, diet, and tonics. The intermittent fever that arises during many protracted cases of illness, must be treated according to the nature of the primary disease, with a combination of the above treatment.—See AGUE.

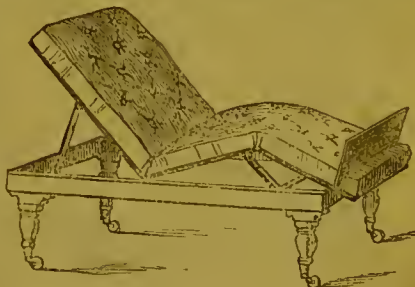
INTRODUCTION, ETIQUETTE OF.—In strict etiquette, persons are supposed to be strangers to each other until they have gone through the ceremony of introduction. This being one of the rules of society, it is incumbent on those having any authority, to introduce persons who are strangers to each other, so as to put them at their ease, and advance the harmony of the company generally. Thus, a host when a person enters the room, who is not generally known by the assembled guests, conducts that person to the various individuals, and makes mention of their names to each other, together with any circumstance calculated to strengthen the acquaintance. The persons introduced bow to each other, sometimes in silence, and sometimes expressing some appropriate compliment, likely to be acceptable. Generally speaking, it is better not to overlay the congratulatory recognition with such phrases as, "I am proud to make your acquaintance;" "I am delighted at having the honour of an introduction to you," &c.; such sentences, in the majority of cases, are unmeaning and insincere, and embarrass rather than gratify the person to whom they are addressed. On the other hand, the ceremony of introduction should not be conducted with too great an amount of formality and reserve; as though it were an act of condescension on your part to notice the

person introduced to you. The truth is, that in this, as in many other points of etiquette, the charm does not reside in the words uttered, or the mechanical carriage of the body, but in the manner and expression, which, with well-bred persons, seldom fails to make itself understood. Inferiors should be introduced to superiors, and gentlemen to ladies. Thus, if a gentleman were walking with his wife, and meet a friend, he should first say with a suitable action, "Mr. So-and-so;" and follow it by, "Mrs. Such-a-one." It is not usual for persons to shake hands when they are introduced to each other, except on extraordinary occasions. Thus, for instance, if the persons introduced have been occasionally talked about to each other in connection with circumstances common to both, the indirect knowledge of each other will permit of a warmer recognition than is ordinarily countenanced. If in the general introduction you are brought face to face with a person whose features and name are familiar to you, you say, "I believe I have had the pleasure of meeting you before," and offer him your hand. Immediately after introduction do not be too loud or loquacious, but lead off with one or two remarks on subjects which you suppose will be interesting, thus giving the person you address an opportunity of talking, without oppressing him with the weight of your own conversation.

INVALID BEVERAGES.—See APPLE WATER, LEMON WATER, RASPBERRY VINEGAR, TAMARIND WATER, WHITE WINE WHEY, &c.

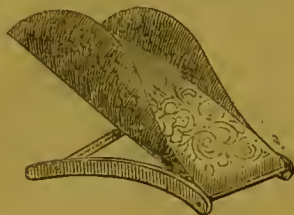
INVALID COOKING.—See ARROW-ROOT, BEEF TEA, CARAGEEN MOSS, CAULDE, GRUEL, MUTTON BROTH, &c.

INVALID FURNITURE.—When the human body is racked with pain, protracted by long-continued sickness, its sufferings may be considerably alleviated and its movements materially assisted through the intervention of mechanical aid. The accompanying engraving illustrates a Double Rising Invalid's Bed, which is so constructed

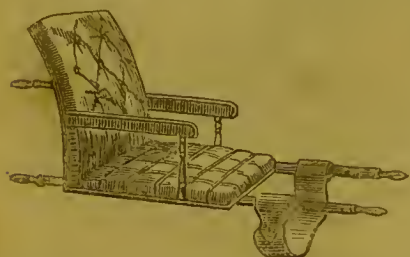


as to adapt itself to the various positions which the invalid may desire to assume. The application is extremely simple, as will be seen in the figure, and may be attended to by one person only. The wearisome effects induced by invalids lying for a long interval on an ordinary bed without being able to change their posture, is well known, so that

a contrivance of this nature is not only productive of immediate ease, but is calculated to accelerate ultimate recovery. When a patient is sufficiently recovered from illness to be able to sit up in his bed, or when it is found necessary to place him in that position, the Invalid Bed Chair, as seen in the annexed engraving, will be found very useful.

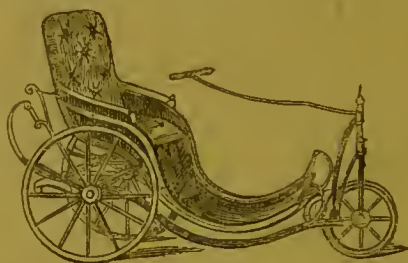


This may be introduced into an ordinary bed, and placed so as to receive the back of the invalid comfortably within it when he reclines backwards. Upon his becoming tired of that position, the chair may either be removed from the bed, or it may be let down on a level with it, by lowering the supports which give it its elevated direction. The desire which invalids frequently express for sitting up for a few minutes, may be gratified by this simple construction without subjecting them to the irritation and annoyance necessarily occasioned by the shifting of the pillows and the continuing of the body in an unnatural position, which the ordinary method entails. It is frequently considered beneficial to order an invalid to leave his bed-room even before he has quite recovered his strength; the depressing influence of the chamber of sickness, and the relief afforded by a removal into another and more cheerful apartment, being one of the most certain means, not only of regaining bodily strength, but of re-establishing mental vigour. Where, however, the distance between the sick-chamber is great, and difficult to arrive at, the transporting of the invalid is frequently attended with so much inconvenience and so many rude shocks, that the contemplated benefit of the



change of room is defeated by the difficulties experienced in getting there, and the patient is frequently disturbed and shaken for the rest of the day. To obviate these ill effects a chair has been constructed for carrying invalids up and down stairs, as here shown, and by the aid of which the invalid may

be removed from one apartment to another with the least possible inconvenience and disturbance. This chair may be brought to the bedside and held on a level with the bed, so that the patient may be gently lifted into it without any perceptible change of position. The seat and back are made sufficiently capacious to receive the body, and the legs may hang down on the receptacle constructed for them. One person proceeding in front and another following behind, and both timing their steps and motions together, the invalid may thus be carried any distance without tiring or disturbing him. When he has reached the room he may be lifted out of the chair gently on to the couch; and when it is considered advisable to remove him back to his bed-chamber, the process may be conducted noiselessly and gently, as before. That stage of convalescence having arrived when the invalid is enabled to sit up, and when the mind, forestalling the body, is continually restless of being fixed in one spot, and desires locomotion, any construction by which this may be achieved is well worthy of attention. It must be borne in mind that the patient is not yet sufficiently recovered to venture out of doors, but is permitted to have the range



of the rooms or the hall of the house to perambulate. When he is enabled to move himself from the table to the window, and from that to the book shelves or the piano, without undergoing any fatigue, a great object is accomplished. The Merlin chair is admirably adapted for the purpose. It is furnished with handles fitted to that portion of the chair where the hands naturally rest, and by turning which the chair is moved by means of pulleys on axles. The proper management of this chair requires some little practice; but when that is accomplished, the ease and readiness with which the invalid may transport himself from one portion of the room to the other, is both soothing and exhilarating. The invalid being now enabled to leave the house, and ordered gentle out-of-door exercise, no contrivance can be better than the Bath Chair, which moves on three wheels, and is hung on springs. Its form is that best adapted for an invalid, giving both rest and support to the body, without taxing its energies. It is propelled by a person who pushes it from behind. The fore part of the vehicle is furnished with a handle by which the invalid may guide the wheels in any

direction, and there being no obstruction in front, he is enabled to take an uninterrupted view of surrounding objects, and to have all the benefit of the fresh air coming full upon him.

INVENTION.—See **PATENT**.

INVENTORY.—A detailed and systematized list of contents of any place, room, or receptacle. In domestic economy, inventories are of the greatest service, and especially where the articles are placed in the care of other persons, or are of that nature as not to be mixed, owing to their being but seldom put into requisition. An inventory has not only immediate practical utility to recommend it, but it is also calculated to act as a moral restraint upon the peculations and paltry abstractions of dishonest servants. For a servant being aware of the existence of an inventory, and knowing that his employer was in the habit of regularly comparing the articles themselves by the written list, would not have the hardihood to commit a depredation, where detection would follow so surely and so soon. By this, it will be understood that the mere making out of an inventory is of no use to preserve the articles intact, unless a systematic investigation is gone through at frequent intervals. When many changes take place from known causes, the inventory should be altered agreeably to the existing contents, and these checked and regulated from time to time. In extensive establishments where a large stock of various kinds of articles are continually in use, an inventory will be found almost indispensable, not only as a check upon the nefarious practices of subordinates, but to acquaint the owner with the renewals which are required, to make up for unavoidable wear and tear, and losses of various causes.

INVITATION, ETIQUETTE OF.—Invitations are usually expressed in writing, and where practicable are sent by hand, not by post. They should be written on superfine paper, enclosed in a neat envelope, and sealed with wax. These little niceties may appear frivolous to some persons, but it should be remembered that almost every act of etiquette is generally an amalgamation of small observances. In writing the invitation, the day and hour alluded to should be distinctly stated, to prevent misapprehension. Thus, instead of merely saying "Thursday," it should be "Thursday next," or "Thursday the 20th instant." The nature of the intended entertainment should also be specified, whether dinner, evening party, dance, &c. When an invitation is received, it should be answered as promptly as possible, whether it be accepted or declined; this is not only an appropriate acknowledgment of the kindness extended, but also has its practical use, in permitting those by whom the invitation is issued to regulate their arrangements according to the number of guests expected. The wording either of an acceptance or a refusal of an invitation, should neither be verbose nor high-drawn, a few simple words answer all the purpose; for if you acted differently, it would appear in the one case that you were seldom invited

out, and in the other that you deemed your presence of so much consequence as to overload your refusal with a superabundance of apologies, so that those who invited you might not take your absence too greatly to heart. Special invitations are necessary to invite persons to your house who are not related, or on terms of the closest intimacy. It is said that "a general invitation is no invitation at all;" and it would be rather awkward if "come whenever you please," and "consider this house as your home," were accepted in a literal sense. Even where the nearest degree of friendship exists, it is better not to dine with any one unless you have been invited; but rather choose some hour in the after or former part of the day to pay your visit, if it be a casual one. It is always understood that one invitation should be responded to by another as soon after the celebration of the occasion as possible; and where there are no pretensions to ceremony, it is customary, upon taking leave of those who have invited you, to invite them to your house in return, leaving it to the persons asked, to name the day most convenient to them. Never invite persons to "tea," with a view of sparing the expense of a dinner; but if your engagements compel you to specify this meal, take care that the subsequent repast is on a liberal scale, so as to do away with any impression of meanness. Take care that the friends whom you invite are all of them on a friendly footing, unless, indeed, it be your intention to bring the contending parties together, and heal their differences; but this office must be executed with great circumspection and extreme delicacy. Do not allow your invitations to be based upon ulterior motives, such as preferring a favour of one of the invited guests immediately afterwards, or of palpably bringing two young persons together with whom you conceive it desirable to make up a match; such manoeuvres usually defeat their own end. When a person neither answers an invitation by attendance or by letter, it is under ordinary circumstances considered that the acquaintanceship is no further desired, and is acted upon accordingly. If, therefore, through any error or accident, an invitation should miscarry and not reach the hands of the person for whom it was intended until after the event of which it speaks has transpired, it is a duty which he owes both to himself and his friends, to hasten immediately and afford an explanation of the apparent act of rudeness. Repeated refusals to invitations from the same quarter are also regarded as tantamount to a desire for discontinuing the acquaintance, unless by some extraordinary coincidence, it is known that the pleas which have been set up were valid and insuperable. When an invitation is given verbally, the person invited should return an absolute affirmative or negative; and not by an ambiguous answer leave it uncertain as to whether he intends to accept or decline.

IODINE.—An elementary substance that is found to reside in minute quantities in all spring water, fresh water, land plants, and

every variety of food; and an essential constituent in the organism of all animals. The iodine of chemistry, when combined with iron, is found to be an excellent tonic in cases of scrofulous debility, and in scrofulous subjects generally. It cannot be prescribed in the solid form; and, from its proneness to undergo decomposition, it is better kept in a state of solution, in the proportion of three grains to a drachm of water, and a coil of iron wire, as a bell spring, should be kept in the bottle with it. The dose of the iodine of iron is from two to five grains.

IPECACUANHA.—A root which in medicine acts as an emetic, diaphoretic, and expectorant. It is used internally to excite vomiting, in doses of from twenty to thirty grains of the powder; or an ounce to an ounce and a half of the infusion, administered every half-hour until vomiting takes place. To cause it to act well and easy, the patient should drink half-pint draughts of warm water. As a *diaphoretic* it should be given in doses of three grains, mixed with some soft substance, such as crumbs of bread, and repeated every four hours. Dose of the wine: from twenty minims to one drachm (as a diaphoretic), and from one drachm to an ounce and a half (as an emetic). *Caution.* Do not give more than the doses named above, for although it is a safe emetic, it is also an acrid narcotic poison.

IRISH CAKE.—Take a pound of butter, three-quarters of a pound of sugar sifted and dried, nine eggs, a quarter of a pound of almonds, and a quarter of a pound of flour dried. Beat the butter to a cream, stir in the sugar, which should be quite hot; then beat the yolks and whites of the eggs separately, pour on the yolks first, and add the whites; work the mixture for half an hour, then add the flour by degrees; when thoroughly mixed, add a gill of brandy. Add the almonds with a quarter of a pound of currants, and a quarter of a pound of lemon-peel, just before the cake is placed in the oven. Previous to placing in the oven, the cake should be beaten for one hour; the hand kept moving the same way, and not taken out.

Butter, 1lb.; sugar, $\frac{3}{4}$ lb.; eggs, 9; almonds, $\frac{1}{4}$ lb.; flour, $\frac{1}{4}$ lb.; brandy, 1 gill; currants, $\frac{1}{4}$ lb.; lemon-peel, $\frac{1}{4}$ lb.

IRISH STEW.—Cut rather thick chops from a loin of mutton, say half a dozen; put them into a saucepan, and add a dozen good sized potatoes sliced and placed in layers with the chops, half a dozen small onions, and about a quart of water; season with pepper and salt; cover the saucepan closely, and let the contents stew over a moderate fire for two hours, or until the potatoes have become nearly a mash, and have absorbed all the gravy from the meat, and the water. The stew should then be dished and eaten hot.

Loin chops of mutton, 6; potatoes, 12; onions, 6; water, 1 quart; salt and pepper, to season.

IRON.—The properties and uses of iron are well known. It is remarkably ductile, and possessed of great tenacity, but it is less

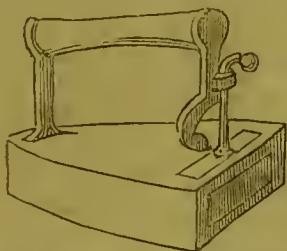
malleable than any of the other metals. It is the hardest of all the ductile and malleable metals, and when combined with carbon or silica, admits of being tempered to almost any degree of hardness or elasticity. The common crude iron of commerce is known as pig iron or cast iron, which is the melted metal discharged from time to time from the furnaces and allowed to run into moulds of sand, so as to form lumps called pigs. Of cast iron there are several varieties, varying in colour, hardness, and composition. They are known as grey, black, and white iron, of which the first is commonly the best. These variations in quality and character of the product depend chiefly on the method followed, and the fuel used in their production.—See *Dictionary of Useful Knowledge*, article *Iron*.

IRON, MEDICINAL USES OF.—The preparations of iron used in medicine are very numerous. In the crude form, the effect of iron is generally to increase the appetite, and to stimulate the digestive powers. It imparts tone and vigour to the whole system, and gives a florid colour to all who take it for any length of time. When iron in any of its preparations has been given in too large doses, or persisted in for too great a length of time, it is apt to cause a state of general excitement, marked by a sensation of fulness in the head, and a degree of giddiness. The administration of iron in any of its forms is not advisable in full and inflammatory habits, in those disposed to a determination of blood to the head, or who have a tendency to active hæmorrhages. Those diseases to which it is applicable are all such as show a deficiency of red blood, or in which there are evidences of direct debility, or in nervous or hysterical affections, or feebleness of the digestive organs, scrofula, &c. The most simple, manageable, and perhaps the most useful of all the preparations of iron, is the *iron wine*; this is particularly appropriate for children. Dose. One drachm to half an ounce. *Carbonate of iron* is an excellent form of tonic, and has much repute for the cure of neuralgic affections, tic-doloureux particularly, and is useful in giving tone to the bowels, and eventually obviating their costive state. The principal objection to it, is its bulk and insolubility. Dose. Half a drachm to half an ounce, three or four times a day, in combination with honey, treacle, or confection of orange peel. *Muriated tincture of iron* is also much esteemed as a tonic, or is a good astringent in both spitting and vomiting of blood. It is also an excellent local styptic applied to bleeding vessels in loose fungous sores.

IRON, TO PRESERVE.—The preservation of iron from rust may be accomplished as follows:—Add to a quart of water half a pound of quicklime; let this stand until the surface is perfectly clear; pour off the clear liquid, and stir up with it a quantity of olive oil, until the mixture becomes a thick cream. Rub any articles which are to be put by, with this mixture, and then wrap them up in paper. If the nature of the articles will not admit of their being wrapped up in

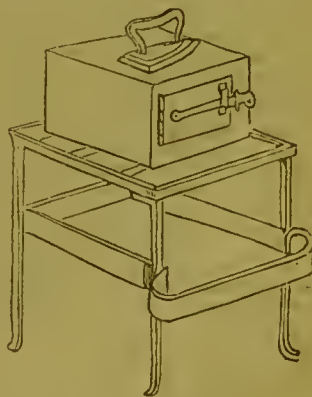
paper, they will remain free from rust by covering them more thickly with the mixture.

IRONING.—A process in connection with the laundry. Previous to ironing, all linen and other articles, after being washed and well dried, must be properly folded and slightly damped by sprinkling water upon them just before the application of the hot iron. The proper degree of dampness is a nicety learned only by practice, but it is essential to the success of a good ironing. Ironing is a very important part of what is termed the getting up of linen; bad ironing is known by the creases left, and inaccurate folding, and sometimes the marks left by ill-cleaned irons, or even iron-moulds. To iron well it is necessary not only to be dexterous in the use of the iron implement, but also it is essential that the mode of heating the irons should be effectual. Smoothing irons are employed to give smoothness to such articles of wearing apparel as do not admit of being wound round a cylinder to be mangled. These implements are of three kinds; the common flat iron, the box iron, and the Italian iron. The common flat iron, which is most frequently employed, is well known. The larger the irons, the longer they retain the heat, and the greater the pressure they are capable of giving. Small irons are employed for more delicate articles. The box iron, as seen in the



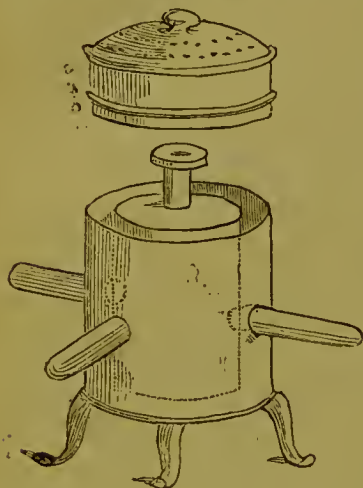
engraving, is an old-fashioned implement, less used than formerly, but ingeniously constructed. As considerable pressure is frequently useful, this iron is made large and heavy; and to retain its heat longer, it is made hollow, the cavity containing an iron heater, which is made nearly red hot, occasionally as the iron cools. To keep this heater in its place, an iron slider is made to shut down in front; and by this mode, the frequent setting down and taking up of irons is avoided. The proper degree of heat in the smoothing iron is very necessary to attend to, and can only be learned by practice. Before using it, it is proper to try its effect upon a piece of blanket kept on the table for that purpose; if the iron be too hot, it will scorch the linen, and if not hot enough, it will not properly perform its office. In the first case, in order not to lose time, some coarse article may be ironed, which a very hot iron will not injure. The use of the iron in the various articles of wearing apparel can be learned only by practice under a skillful

operator; no verbal directions can be sufficient. A few hints, however, can be given. Things that require to be very flat, as shirt collars, require to be covered by a towel in the first ironing, and then gone over on both sides with the box iron. Laces and worked muslins require a soft and very good ironing blanket, and they are to be dried by rolling them up, and to be unrolled as they are ironed. When silks are ironed, they should be covered over with paper, to prevent the iron from touching the silk itself, which produces an unsightly glossiness. Great care must be taken not to scorch anything, for this not only discolours the article, but injures the fabric. The Italian iron affords a very neat and expeditious way of ironing certain articles, as frills, which require to be puffed. It is a hollow tube, and is heated by a cylindrical piece of iron made red hot and inserted in it. The articles to be ironed are drawn over the iron, instead of passing the iron over them. A clean and expeditious way of heating smoothing irons is very essential in a good laundry. In a very small way, these irons are heated by placing them on a moveable iron shelf hung on the bars of a grate; but in this manner they are apt to be soiled by the ashes and coals, and require careful wiping to prevent staining the linen. To obviate this inconvenience, ironing stoves are constructed, by which the irons are heated without any possibility of their contracting any dirt. Sometimes the ironing stove forms a recess in the wall like a small chimney, with a hot plate and furnace below it. Upon this hot plate the irons are set to be heated; and there should be an air-flue above the plate to carry out the hot air, and prevent its incommoding the laundry. Generally, however, the ironing stoves are detached, and stand in the laundry, and then answer the double purpose of warming the room, and heating the irons. The annexed figure represents one of



the smallest kind; it is made wholly of iron; the fire is contained in the box on which the smoothing iron is placed, and a pipe is inserted in the back, to carry off the smoke into the chimney flue. An

apparatus has also been constructed for heating Italian irons. It is a short iron cylinder placed within another about four inches wider, the inner one being filled with lighted charcoal, and the space between left empty; four cylindrical pieces of brass pass through this space, and enter into the fire chamber, by which means they are heated sufficiently. The fumes or deleterious gas formed by the combustion of the charcoal, pass out through the tube seen in



the apparatus, and when the cover is put on, they issue through the holes in it. The ironing-board or table should be very strong and steady; and for this purpose one end or side of it is generally placed against a wall. It should likewise be placed on the window side, to have the benefit of a perfectly good light. The ironing cloth, which is a kind of blanket made on purpose, of a proper width and thickness, should be double, and should be firmly and securely pinned down round the table, to prevent its moving.

IRONMOULD.—A stain produced in linen by ink and deleterious compounds. To remove an ironmould it should be wetted, then laid on a hot-water plate, and a little essential oil of lemons put on the part. If the linen becomes dry, wet it, and renew the process, observing that the plate is kept boiling hot. Much of the powder sold under the name of salt of lemon is a spurious preparation; and, therefore, it is necessary to dip the linen in a good deal of water, and wash it as soon as the stain is removed, to prevent the part from being worn into holes by the acid.


IRRIGATION.—The act of watering the soil. This operation acts in two ways, mechanically and chemically. The mechanical act of irrigation is, that it softens the soil, and preserves the roots of plants in a healthy state. It also serves to dissolve the various earthy matters contained in the soil, and acts as a medium by which

they are taken up into the plants. The chemical action of irrigation is produced by the water which irrigates the land becoming decomposed, and furnishes fresh combinations with various elements which it attracts, partly from the air, and partly from the soil. The act of irrigation applies more to meadow land and fields of crops, than to the ordinary garden. In *surface irrigation*, the water is conveyed in a system of open channels, which require to be most numerous in such grounds as are under drilled annual crops, and least so in such as are sown in breadths, beds, or ridges, under perennial crops. *Subterraneous irrigation* may be effected by a system of drains, or covered gutters in the subsoil, which, proceeding from a main conduit or other supply, can be charged with water as required. For grounds under the culture of annual plants, this mode is more convenient, and for all others more economical, as to the use of water, than surface irrigation. When the under stratum is gravelly, and rests on a retentive stratum, this mode of watering may take place without drains, as it may also on perfectly flat lands, by filling to the brim, and keeping full for several days, surrounding trenches; but the beds or fields between the trenches must not be of great extent. Flooding and warping are modes of irrigation, the former for manuring grass lands, and the latter for enriching the surface of arable lands; while both at the same time gradually raise up the surface of the soil. Irrigation with a view of conveying additions to the soil, has long been practised, and is an evident imitation of the overflowing of alluvial lands, whether in meadow or aration. In the former case, it is called irrigation or flooding, and in the latter, warping. Warping is practised chiefly as a mode of enriching the soil by an increase of alluvial depositions, as warp of rivers during winter, where the surface is not under crop.

ISINGLASS.—A substance consisting entirely of gelatine, and the purest variety of this principle. It is prepared from the sounds or swimming bladders of various fish, chiefly the sturgeon, which affords the finest kind. The quality of good isinglass is determined by its whiteness, absence of the least fishy odour, and ready, and almost entire solubility in boiling water; the solution forming a nearly white, scentless, semi-transparent, solid jelly when cold. Isinglass is extensively adulterated, principally with gelatine, and may be tested as follows: Take a few threads of the substance, drop some into boiling water, some into cold water, and some into vinegar. In the boiling water, the isinglass will dissolve; in cold water, it will become white and cloudy; and in vinegar, it will swell and become jelly-like. In boiling water, gelatine will not so completely dissolve as isinglass; in cold water, it becomes clear and jelly-like; and in vinegar, it will harden.

ISINGLASS FLUMMERY.—Dissolve, without boiling, two ounces of isinglass in a pint of water; add a gill of white wine,


with the juice of two lemons; sweeten; beat the yolks of six eggs, add them to the other ingredients, and thicken the whole by stirring it over the fire; pour it into a basin, and agitate till cold; put by in moulds or glasses. This mixture is considered to be very nourishing for invalids.

 Isinglass, 2ozs.; water, 1 pint; white wine, 1 gill; lemons, juice of 2; sugar, to sweeten; eggs, 6 yolks.


ISINGLASS JELLY.—Boil in a quart of water an ounce of isinglass and a quarter of an ounce of cloves, till reduced to a pint; then strain it over sugar, and serve, when cold, in glasses.

ISINGLASS, TO CLARIFY.—Take about two ounces of the best and clearest sort of isinglass for a quart mould of jelly, put it into a stewpan, with just sufficient cold water to cover it completely; set it by the fire, stir it occasionally, and clear the scum as it rises; let it boil very gently, and until the whole is reduced to three-quarters; then strain it through a sieve or cloth into a basin for use.


ITALIAN BREAD.—Make a stiff dough with twelve tablespoonfuls of fine flour, six of white powdered sugar, three eggs, a lemon-peel grated, and two ounces of fresh butter; mix them in a pan with a wooden spoon; and if the dough is not sufficiently firm, add more flour and sugar. Then turn it out, and work it well with the hand, cut it into the shape of round long biscuits, and glaze them with white of egg.

 Flour, 12 tablespoonfuls; sugar, 6 tablespoonfuls; eggs, 3; lemon-peel, 1; butter, 2 ozs.

ITALIAN CHEESE.—Chop very fine two pounds of pork liver, with a pound and a half of the fat of pork; add a shalot, an onion, a clove of garlic, a bay-leaf, a sprig of thyme, half a dozen mushrooms, all chopped fine; season with salt and spices. When well mixed, butter a mould, press the ingredients closely in, moistened a little with butter, and put it into an oven for two hours; when cold, turn it out.


 Pork liver, 2lbs.; pork fat, 1½lb.; shalot, 1; onion, 1; garlic, 1 clove; bay-leaf, 1; thyme, 1 sprig; mushrooms, 6; salt and spices, to season.

ITALIAN CREAM.—Whip together for nearly an hour, a quart of very thick scalded cream, a quart of raw cream, the grated rind of four lemons, and the juice strained, with ten ounces of white powdered sugar; add half a pint of white wine, and continue to whisk the whole until it assumes a solid. Lay a piece of muslin in a sieve, and lade the cream upon it with a spoon. In twenty-four hours turn it carefully out, and be careful that it does not break.

 Cream, 1 quart scalded, 1 quart raw; lemon, peel of 4, juice of 4; sugar, 10ozs.; white wine, ½ pint.

ITALIAN FRITTERS.—Make a batter with three tablespoonfuls of fine flour, a gill of cream, a glass of white wine, two ounces of sugar, and four eggs; beat the whole thoroughly; mix in currants minced, raisins, or other fruits, almonds, and a little

veal kidney fat, or marrow; fry them high over the fire, that they may be well done.

 Flour, 3 tablespoonfuls; cream, 1 gill; white wine, 1 wineglassful; sugar, 2ozs.; eggs, 4; currants, raisins, almonds, and veal kidney fat, sufficient.

ITALIAN PIE.—Mix together some chopped thyme, parsley, and one or two sage leaves, salt, white pepper, and cayenne; lay into the bottom of a dish some thin slices of lean veal, sprinkle them with the seasoning, and add slices of ham, and a few forcemeat balls; put in a layer of seasoned veal, of ham, and forcemeat balls, alternately, till the dish is filled; then add the yolks of five eggs hard boiled, and some good white stock; cover the dish with a puff paste, and bake it for an hour. Before serving, pour in through a funnel, fixed in the centre of the crust, a teacupful of rich cream.

ITALIAN SAUCE.—Put into a saucepan two slices of ham, a handful of minced mushrooms, a lemon minced without the pips, a spoonful of minced shalot, blanched, and wrung in a cloth, half a clove of garlic, and a gill of olive oil; when nearly ready, take out the lemon, add a spoonful of minced parsley, a glass of white wine, and a little pepper; let the whole simmer till reduced one-fourth; take out the ham, and serve.

ITALIAN SOUP.—Make three quarts of stock, which strain through a fine sieve into a stewpan; add to it three ounces of sago, and let it boil gently for twenty minutes, then skim it. The stock being previously seasoned, will only require half a teaspoonful of sugar, a little salt, pepper, and nutmeg; a limited addition of thyme and parsley, with a bay-leaf, will vary the flavour. Just before serving, put into a basin the well-beaten yolks of four eggs, and add to them half a pint of cream; then take the stewpan off the fire, pour the cream and eggs in, stir quickly for one minute, and serve immediately.

ITCH.—This cutaneous and offensive disease, the result of bad living and dirt, is propagated by the merest contact; and as this is a misfortune that any person may be exposed to, by touching in a cursory manner the person of an affected individual, it is necessary to show the means by which, within a day or two's seclusion, it may be effectually eradicated. The intolerable itching that so remarkably distinguishes this disease, is the consequence of a very minute microscopic insect which burrows under the scarf skin of the hands and body, and all that is necessary to destroy the life of this insect, and of course cure the disease, is, to block up the pores of the skin, by rubbing in some stiff simple ointment upon going to bed; use a hot bath in the morning to cleanse the body of the grease, and repeat the ointment again; and so continue the one at night, and the other in the morning till the cure is effected. For long standing cases sulphur or creosote is necessary, but for triding cases, spermaceti ointment is quite sufficient, the hands being kept greased and gloved both day and night.

IVORY.—A substance which is properly obtained from the tusks of the elephant, the teeth of the hippopotamus, wild boar, &c. It is largely used for the handles of knives, and for other purposes requiring a smooth and clean white surface. Carvings in ivory when not kept under glass, sometimes become covered in time with a multitude of minute cracks, which get filled with dirt, and deface them. Glass not only protects them from this injury, but affords the means of bleaching or whitening ivory which has been discoloured. This effect is produced by exposing the articles to the sun's rays under glass, turning each side in succession to the direction of the rays. To remove the cracks before mentioned, the ivory should be washed in soap and warm water with a brush till the cracks disappear, after which the article should be placed under glass.

IVORY JELLY.—Put half a pound of ivory powder into three pints of cold water, let it simmer until reduced to a pint and a half; when cold, take the jelly carefully from the sediment; add to it the juice of a lemon, half the peel, two or three cloves, and sugar to taste; warm it till quite dissolved, then strain it.

IVORY, TO SILVER.—Immerse the ivory in a weak solution of nitrate of silver, and suffer it to remain until it has acquired a deep yellow colour; then take it out, wash it with water, and expose it to the sun's rays, which will turn it black in about three hours; the ivory will upon being rubbed, assume a silvery appearance.

IVORY, TO STAIN.—Ivory may be stained of any colour, after being freed from dirt and grease, as follows:—*Black.* Wash the ivory well in an alkaline lye, steep it in a weak solution of nitrate of silver, then expose it to the light. *Blue.* Steep it in a weak solution of sulphate of indigo which has been nearly neutralized with salt of tartar. *Brown.* As for black, but using a weaker solution of silver. *Green.* Dissolve verdigris in vinegar, and steep the pieces therein for a short time, observing to use a glass or stoneware vessel. *Purple.* Steep it in a weak neutral solution of perchloride of gold, and then expose it to the light. *Red.* Make an infusion of cochineal in water of ammonia, then immerse the pieces therein, having previously soaked them for a few minutes in water very slightly acidulated with aquafortis. *Yellow.* Steep the pieces for some hours in a solution of sugar of lead, then take them out, and when dry, immerse them in a solution of chromate of potassa.

IVY.—A hardy evergreen climbing plant, common everywhere in Europe, and forming an excellent screen when planted against trellis-work. The common ivy is very often employed for covering exposed buildings or trees; which latter, however, it invariably kills. It may be propagated by seeds, but in all its varieties is quickest propagated by slips inserted in a north border in sandy soil, kept moist in the autumn. This is far better than inserting it at once where it is intended to remain. Deep, rich soil suits the com-

mon ivy; the tender kinds should have lighter soil. For clothing dead trees, covering open fences, giving an air of antiquity, affording security, supplying warmth and dryness to buildings, and even producing architectural effects, and covering the ground in shady places with a green carpet, where scarcely anything else would grow, the ivy is invaluable.

J.

JACK.—A name given to the pike before it attains the weight of four or five pounds.—See PIKE.

JACK, BAKED.—Cut the fish open, remove the entrails, and thoroughly cleanse the inside; then make a stuffing as follows: half a dozen oysters chopped, the crumb of a penny loaf, a little lemon-peel shred fine, a quarter of a pound of butter, the yolks of two eggs, a few sweet herbs, and a savouring of pepper, salt, and nutmeg. When these ingredients are thoroughly mixed, put them into the belly of the fish, which must then be skewered and sewn round. Then rub the fish over with yolk of egg, and strew over it crumbs of bread and grated nutmeg; place a piece of butter on it here and there, then put it into a dish with half a pint of good broth or gravy, and bake it in a moderately heated oven; the time required being proportioned to the size of the fish. Make a sauce with the gravy in which the fish has been baked, adding a spoonful of anchovy essence, a little ketchup, the juice of a lemon, and some butter rolled in flour; let them be boiled together for a few minutes; pour it over the fish, garnish with fried parsley, and serve.

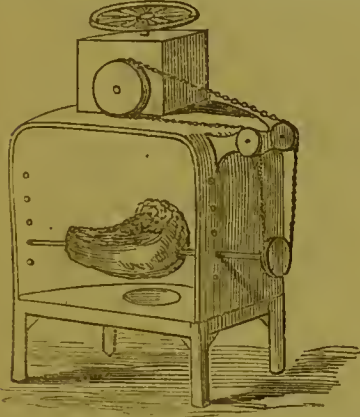
JACK, BOILED.—Scale the fish, open the throat near the gills, and after cleansing the fish thoroughly, stuff it with the following: grated bread, herbs, anchovies, oysters, suet, salt, pepper, mace, half a pint of cream, and the yolks of four eggs; mix all over the fire till it thickens, then put it into the fish, and sew the fish up. Boil it, and when nearly done, mix a large cupful of rich broth, with a dessertspoonful of the essence of anchovy, the same of soy, a little lemon-juice, and some butter rolled in flour; boil these up, pour it over the fish, and serve.

JACK, POTTED.—Scale the fish, and cut off the head; split it, and remove the backbone; strew it over with salt and pepper; cover it, and bake it; then take it out, and lay it on a coarse cloth to drain. When it is cold, place it in a pot large enough to hold it, and cover it with clarified butter.

JACK, ROASTED.—Let the fish lie for some days, then scale and cleanse it; stuff it with bacon rolled in salt, spices, shred parsley, and shalots; wrap the fish in a buttered paper, on which spread sweet herbs, spices, and salt; place it on the spit, and baste it with white wine and melted butter. When done, remove the paper, and serve the fish with a piquant sauce.

JACK SALAD.—Cut the remains of a cold jack into pieces, and mix with it gherkins, capers, and anchovies, and some herbs shred; serve the jack, garnishing the dish with lettuces and hard-boiled eggs. Mix oil and vinegar at table.

JACK, FOR ROASTING.—This culinary implement has been introduced in a variety of forms. The best kind is an improved spring jack as shown in the engraving, and in which the article to be roasted is fixed on a spit lying horizontally in the usual manner. A box on the top contains the spring, which causes a wheel to revolve in front; round



this, an endless chain passes over two pulleys to the spit, which goes through on the side of the tin screen. By means of a series of holes, and shortening or lengthening the chain, the height of the spit can be adjusted; and there is a fly-wheel to regulate the motion.—See BOTTLE JACK.

JACKDAW.—A well-known bird of the rook genus. The bill and legs are black; the claws strong and hooked; eyes white; and the hinder part of the head and neck silvery gray; the rest of the plumage is of a



fine, glossy blue-black above, and dusky beneath. The jackdaw may be easily tamed; it is an amusing bird, and may be taught to imitate the human voice in speaking, singing, &c.

JALAP.—A medicinal agent derived from a root indigenous to South America. It is a stimulant cathartic, performing its office briskly, and safe and efficacious, although occasionally griping severely. It is a good medicine in the torpid state of the intestines; and for children who are troubled with worms. A drop or two of some essential oil, as the oil of carraway or aniseed, should be added to each dose of jalap, to prevent griping. The dose is from ten grains to half a drachm, given in the form of pill or powder.

JAM.—Fruit boiled down with sugar to the consistence of a paste. Jams form valuable domestic stores, supplying us the flavour and essences of fruits at such times as they are no longer in season. In the preparation of this confection, some little care and nicety are demanded; ordinarily



they are prepared in stewpans lined with enamel, and placed over the fire of the kitchen. An improved method of preparing jams, however, is through the medium of the small portable French stove or furnace in the accompanying illustration; this is furnished with a trivet and stewpan, and is exceedingly convenient for the purpose intended. By this furnace all smoke is kept away, and the heat can be regulated at pleasure. There should always be a free current of air in the room in which it stands when lighted, as it is lighted with charcoal, that being the only fuel suitable to it. To kindle it, two or three pieces must be lighted in a common fire, and laid on the top of that in the furnace, which should be evenly placed between the grating and the brim, and then blown gently with the bellows until the whole is lighted; the door of the furnace must in the meanwhile remain open, unless the heat should at any time prove too fierce, when the door must be closed for a few minutes to regulate the heat. To extinguish the fire entirely, the cover must be pressed closely on, and the door be quite shut; the embers which remain will serve to re-kindle it easily, but before it is again lighted, the grating must be lifted out and all the ashes cleared away. It should

be set by in a place which is not damp. In making jams it is desirable to have three or four wooden spoons or spatulas, one fine hair-sieve at the least, one or two large squares of common muslin, and one strainer or more of closer texture, kept exclusively for this purpose; for, if these things are used for other purposes, there is the hazard of their retaining some coarse or strong flavour, which they would impart to the jam. Damp is a great enemy to jams, and it is therefore essential to place them in a dry cool place. To obviate any danger of their becoming mouldy, there is nothing more required than to moisten thin brown paper, or silver paper, with the white of an egg; as by this means the covering will adhere closely, and effectually exclude the air.—See PRESERVING; likewise APRICOT, BARBERRY, BLACKBERRY, CHERRY, CURRANT, GOOSEBERRY, GREENGAGE, RASPBERRY, STRAWBERRY, &c.

JAMES'S POWDER.—This celebrated medicine is a specific originally introduced by Dr. James, a London physician. It operates as a diaphoretic and alterative, and is often of excellent use in colds, coughs, the commencement of fevers and all inflammatory actions, as it changes in a very gentle, and frequently insensible manner, the diseased condition of action in the minute vessels of the circulating system, and thus conducts the existing malady to a favourable termination. If it be administered early, after the operation of purgatives or an emetic, fevers of the most threatening aspect are frequently arrested by it. Its good effects are almost always increased by the addition of a small quantity of calomel, such as half a grain or a grain to each dose. Thus combined, and also united with guaiacum, it is administered with much effect in obstinate eruptions of the skin. In fever, inflammation, and other acute complaints, it must be given in doses, frequently repeated, of three, four, and five grains, with half a grain of calomel every four or five hours; and its operation is assisted by the patient drinking freely of some warm diluting fluid during the day.

JANUARY, GARDENING FOR.—*Kitchen Garden:* *Artichokes*, attend to, shelter, &c. *Asparagus*, plant in a hotbed, attend to forcing. *Beans*, plant, earth up early ones, plant in hotbed. *Beet* (red), plant for seed. *Cabbages*, plant, sow, plant for seed. *Carrots*, attend to, shelter, &c. *Carrots*, sow small crop, plant for seed. *Cauliflowers*, attend to those under frames, as also those picked, sow. *Celery*, earth up, shelter, &c. *Composts*, prepare and turn over. *Cucumbers*, sow, prick out. *Dung*, prepare for hotbeds, wheel on vacant ground. *Earth* up plants disturbed by frost. *Endive*, blanch. *Frost*, protect plants from, which require it. *Ground* (vacant), dig trenches, &c. *Hotbeds*, make and attend to. *Horseradish*, plant. *Jerusalem artichokes*, plant. *Kidney beans*, sow in hotbeds. *Liquorice*, plant, dig up three year old plants. *Lettuces* in frames, attend to, transplant to force, sow. *Melons*, sow. *Mint*, force in hotbed. *Mushroom* bed, make, attend to those in production. *Mustard and Cress*, sow

in hotbed. *Onions* (winter standing), clean from weeds, examine those in store, sow small crop, plant for seed. *Peas*, sow, earth up advancing, plant in hotbed, prepare stocks for. *Potatoes*, plant. *Radishes*, sow in hotbeds and in borders. *Rape* (for salading), sow in hotbed, (edible root) sow. *Savoy*, plant for seed. *Salading* (small), sow. *Spinach*, clean from weeds. *Tansy*, plant in hotbeds. *Tarragon*, plant in hotbed. *Turnips*, plant for seed. *Weeds*, persistently destroy.

General Remarks.—During this month do everything that can tend to lessen the labour of the succeeding month, which is generally a busy one. Pick up all dead leaves, and remove plants destroyed by the frost. Destroy slugs, set traps for mice, and remove all larvae, webs, eggs, &c.

Flower Garden.—Plant dried roots of border flowers, if not done before, but defer planting bulbs of the finer florist's flowers till February, unless the weather is very mild. Transplant daisies and other edgings, if the weather hold fine. Protect choice plants by matting, litter, cases of wickerwork, old bark, and all other proper means, observing to do it with due attention to neatness in this department of gardening. Attend to the finer sorts of tulips, which will emerge from the ground by the end of the month; hoop them over, and apply mats. Attend to flowers under glass cases; let them have air every dry day, and protect them in severe weather with mats, &c. *Mignonette* and other prolonged annuals, as stocks, sweet peas, &c., will require similar attention. Look to choice auriculas and polyanthus; keep them plunged in frames in old tan, or, what is better, sawdust or ashes. In general, never attempt to keep a potted plant through the winter in a cold frame, unless it be plunged, or the pots are standing close together. In hotbeds and pits, begin to force roses and other shrubs and hardy flowers, as well as bulbs. In the greenhouse, see that the most delicate plants be placed on the warmest part of the house, in so far as is consistent with other arrangements; give air freely when the weather is mild, and water at all times sparingly. Keep the lawn and grass walks neat and smooth by rolling; if any part require fresh turf, this is the season for cutting and laying it down: that from a common is best, as the herbage is short, and free from nettles, docks, &c.; lay it down firmly and evenly, allowing for the sinking of the newly laid earth an inch or two; roll it well after it is down. Weed and roll gravel walks when the weather is dry. Dig clumps where evergreens are intended to be planted in February and March—the frost will render newly dug earth more friable. If the weather is very settled and mild, plant out hardy deciduous shrubs, as sweetbriars, double bramble, double-blossomed cherry, dwarf almond, jessamine, honeysuckle, roses, lilacs, laburnums, guelder rose, mezereons, &c.; transplant each shrub with a good ball of earth round its root. Prune flowering shrubs now where they require it, with a sharp knife, not with shears. Transplant suckers from hardy flowering shrubs; take care not to injure their roots, support them

neatly with stakes. Cuttings of shoots of hardy deciduous shrubs may be planted in mild weather to root, and form good plants by autumn. Layers may also be formed.

JANUARY—THINGS IN SEASON.—Fish: Cod, cels, flounders, haddock, mullet, perch, plaice, skate, soles, whittings, turbot.

Meat: Beef, ham, mutton, pork, veal.

Poultry and Game: Capons, fowls, hares, partridges, pheasants, pigeons (tame), rabbits, snipes, turkeys, woodcocks.

Vegetables: Brocoli, cabbages, carrots, celery, endive, leeks, onions, potatoes, savoy, spinach, sprouts, turnips.

JAPANNED ARTICLES, TO CLEAN.—In cleaning tea trays, bread pans, candlesticks, and other articles made of japan ware, hot water should not be used, as it will produce fractures and cracks; lukewarm water is the best to use. To remove grease, let the water be just warm enough to melt it; then wipe the articles with a cloth, and if they appear smeared, sprinkle a little flour over them, and wipe it clean off.

JARS.—These domestic utensils are well known as the depositories of preserves, pickles, fruits, &c. When they are used they should be perfectly clean and dry; and if there is any reason to doubt their sweetness, they should be thoroughly scalded with boiling water previously to being used. The best kind of jars for general use are those of brown ware, glazed on the inside.

JAUNDICE is the name given to the effect produced on certain parts and secretions of the system by a diseased state of the liver, or whatever cause prevents the bile from finding its natural outlet; and by confining it to the gall-bladder, or the secreting vessels of the liver, causes it to be absorbed into the blood, and, passing into the circulation, gives rise to those symptoms, which constitute what is called jaundice. The word "jaundice" signifies *yellow*, and is used to designate that impaired state of the liver known by the external signs of a yellow skin, a yellow tinge of the white coat of the eye, and a deep saffron colour imparted to the secretion from the kidneys, while the other alimentary discharges are almost white; these characteristics of jaundice are attended with languor, loss of appetite, sometimes amounting to a loathing of food, disturbed sleep, great avidity both of stomach and bowels, nausea and often sickness; a heavy bitter taste, that no cleanliness can eradicate, pervades the mouth and fauces, while a dull heavy pain takes possession of the right side, just over the liver, greatly increased by pressure, but which no change of position abates. Attending these symptoms there is always more or less of what is understood as fever: when the disease is protracted, and the bile remains long unremoved from the blood, the skin and eyes darken in their colour, and assume a *green* aspect, and when still more obstinate of cure, that green becomes of a deep purple or blackish hue, when the disease is called black jaundice.

Jaundice is a very common disease in hot climates, especially to Europeans newly arrived, and, indeed, is by no means rare in

this country and the sister island, and though, as we have already said, it may proceed from any diseased condition of the liver, there are many other causes that may induce it, such as pressure on the liver by the formation of tumours, pregnancy, and the presence of gall-stones, though in this latter case the cause is generally easily discovered by the severity, sharpness, and continuance of the pain. Though the remedies employed for jaundice are under all circumstances nearly alike, it is both satisfactory and useful to discover as early as possible what is the immediate cause that, obstructing the bile, has led to its absorption by the blood; as on this knowledge much time may be saved in the treatment, which is remarkably simple, and may be undertaken with the greatest confidence without consulting any medical opinion. In all cases of jaundice, especially when attended with pain, the warm bath is of the utmost importance, as it will afford instant relief; and if the pain and disease proceeds from a gall-stone, the heat of the bath, by expanding the duct in which it is impacted, will almost immediately facilitate its passage, and thus by removing the obstruction, at once remove the cause of the disease.

As remedial means, the adult patient should take one of the following pills three times a day, or one every eight hours, and every second morning two teaspoonfuls of Epsom salts dissolved in a tumblerful of cold water, with a wineglassful of dandelion-tea every four or five hours, and continued as long as it is necessary to take the pills.

Pills. Take of

Camphor	2 grains.
Powdered opium . . .	2 grains.
Blue pill	20 grains.

Mix and divide into six pills. Take of

Dandelion roots, washed and cut small	2 oz.
Liquorice root and saffras, of each	2 drachms.
Boiling water	1½ pint.

Simmer slowly for twenty minutes; strain, and, when cold, give a wineglassful every four or five hours.

When the obstruction has been removed, and the cure has been effected—as the restoration of the skin and eyes to their natural colour will indicate—it is sometimes necessary to take a tonic for a few days, to restore the tone of the stomach; this will be best effected by taking a tablespoonful of the following mixture an hour before each meal for four or five days:—Infuse 2 drachms of gentian, 2 drachms of carbonate of soda, and 1 drachm of ginger for six hours in a pint of boiling water; and, when cold, giving it in the above doses. To those subject to jaundice, exercise and sea-bathing should be vigorously adopted after each recovery, so as to work the system into an energetic and self-supporting condition; for if not excited out of its torpidity, the body is very prone to relapse into its previous torpidity.

JAY.—A beautiful bird, about the size of a pigeon; its beak is black, and resembles that of a crow; the feet are brown and some-

what inclined to flesh colour; almost the whole of the body is tinged with purple ashen grey; the throat is whitish, the parts near the tail perfectly white; the large loose feathers on the top of the head can be raised into a black, gray, and purple crest; on each



side of the head a black stripe runs from the lower mandible almost half way down the neck; the pen feathers are blackish, the centre ones having a white border, which produces a spot of the same colour on the wings. The larger coverts are crossed on the outer side by bright, narrow stripes of whitish blue, light blue, and bluish black. The female is only distinguishable from the male by having on the back of the neck a grayish, in place of a reddish tinge. *In order to take this bird, in autumn, choose, in a spot frequented by them, a fir or pine which stands five or six paces from any other tree; cut from this all the superfluous branches, leaving only sufficient to form a sort of ladder, and dock these to the length of about two feet; let these branches, which should extend from about ten feet from the ground to six feet from the summit of the tree, be covered with lime twigs; under the tree a small hut lightly roofed with brushwood is to be built capable of holding as many persons as wish to share in the sport. On this is placed a living or dead owl, or an owl fabricated of clay, or even a hareskin will do, so that it is attached to a string by which it can be moved. To attract the jays, the cry of the owl should be imitated; the jays, its enemies, flock together and utter their cries. The alternate cry of owl and jay brings more; they fly on to the lime twigs, fall down, and are carried by the weight through the roof of the hut. This mode of catching jays may be practised either at daybreak or twilight.*

JELLY.—Fruit jellies are compounds of the juices of fruits combined with sugar, concentrated by boiling to such a consistence that the liquid, upon cooling, assumes the form of a tremulous jelly. Vegetable jelly is a distinct vegetable existing in fruits, which possesses the property of gelatinizing when boiled and cooled; but it is a principle entirely different from the gelatine of animal bodies, although the name of jelly is common to both. Animal jelly is glue, and vegetable jelly is rather analogous to gum. In preparing vegetable jellies, it is necessary to guard against boiling them too long, since

this destroys their property of gelatinizing, and they then assume the appearance of mucilage or gum; and this accident is most likely to occur when the quantity of sugar is too small to absorb the water of the juice. Jellies are most perfect as to beauty and transparency when clarified sugar is used; but for ordinary purposes, refined sugar answers very well. Jellies were formerly supposed to be particularly nutritive; but the prevailing opinion at present is that they are less so, and even less digestible than the flesh of muscular parts of animals: still, when acidulated with lemon-juice and flavoured with wine, they may be very properly given to convalescents, as they present a form of nourishment agreeable to the palate and readily taken. — See APPLE, APRICOT, BARBERRY, CALF'S FOOT, CURRANT, GOOSEBERRY, &c.

JELLY-BAG.—A jelly-bag may be made of felt or flannel, and is used for straining jellies through after they are made. The process is to suspend the bag immediately above the receptacle into which the jelly is to run; and then pour the jelly in from time to time until all is strained through.

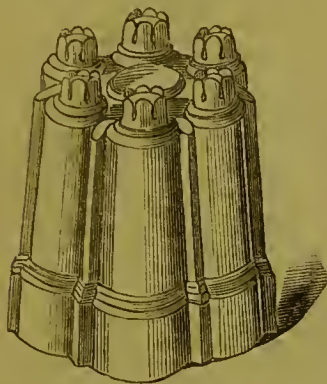


JELLY, COLOURING FOR.—To produce red, boil very slowly in a gill of water, till reduced to one-half, twenty grains of cochineal, the same quantity of alum and of cream of tartar, finely pounded; strain the mixture, and keep it in a phial to be used as required. For yellow, use an infusion of saffron. For green, wash well, and pull into small bits, a handful of spinach leaves; put them into a closely covered saucepan, boil them for a few minutes, and then express the juice.

JELLY MOULDS.—The shape of the moulds used for jellies is a matter of importance in the appearance of the entremets of a handsome dinner. They should be high and nearly of the same size. If the jelly sinks flat in the dish it presents an insignificant and unsightly appearance. The cylindrical mould shows the transparency of jelly excellently, the centre being filled in with a light whipped cream after the jelly is dished, which not only enhances its appearance, but improves its flavour. One of the most recent improvements is that known as the Belgrave mould, which is of superior construction for the purpose, as it contains a large central cylinder, and six smaller ones, which, when withdrawn after the jelly is set, leave vacancies which can be filled either with jelly of another colour or with fruit of different kinds, or with blancmange, or any other isinglass cream. The space left by the larger cylinder may be left empty, or filled, before the jelly is served, with white, or with pale-tinted whipped cream.

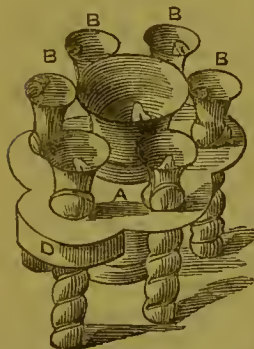
Water, only sufficiently warm to detach the jelly from them without heating or melting it, must be poured into the cylinder to unfix them; and to loosen the whole so as to

Fig. 1.



unmould it easily, a cloth wrung out of very hot water must be wound round it, or the mould must be dipped quickly into some which is nearly or quite boiling. A dish should then be laid on it, it should be carefully reversed, and the mould lifted from it gently. Fig. 1 represents this mould in its entirety; fig. 2 shows the interior of the same mould inverted.

Fig. 2.



A is the thin metal plate, which, when turned downwards, forms the bottom of the mould, and which is perforated in six places to permit the fluted columns B to pass through it. There is also a larger aperture in the middle, to admit the centre cylinder. The plate is fixed, and the whole is held in its place by the part which folds over the larger scallop D at either end. There is also a cover which fits the mould, and which is pressed on it before it is dipped into water, to prevent its getting into the cylinder.

JERSEY CAKE.—Take two pounds of flour, six ounces of butter, six ounces of white sugar, a little nutmeg, ground ginger, and lemon-peel; heat eight eggs, and mix them thoroughly with the before-named ingredients. Roll the mass about the thickness of your crust, cut off a small slice, and form it into an oval, about four inches long and three inches wide, not too thin; cut two slits in it, but not through either end, there will then be three bands. Pass the left one through the aperture to the right, and

throw it into a brass or hell-metal skillet of boiling lard, or beef or mutton dripping. Three or four of these cakes may be cooked at a time. In about two minutes, turn them with a fork, and they will be browned and swollen, or raised in two or three minutes more. Remove them from the pan to a dish, and leave them to dry and cool.

JERUSALEM ARTICHOKE, CULTURE OF.—A hardy perennial, a native of Brazil. The season of its flowering is September and October; but though its roots endure our hardest winters, the plant seldom flowers with us, and it never ripens its seeds. It is raised by planting, either some small offset tubers of the main roots, or middling sized roots, cut into pieces for sets, which is more eligible. Preserve one or two full eyes to each cutting. It will grow in any spare ordinary part of the garden; and to obtain fine large roots, sow in an open compartment of pretty good mellow ground. The season for planting is February, March, or the beginning of April. Having dug the compartment, plant them either by dibble in rows, two and a half feet asunder, about eighteen inches in the lines, and three or four inches deep; or in drills by a hoe the same depth and distances. The plants will come up in April and May. In their advancing growth, hoe and cut down all weeds, drawing a little earth to the bottom of the stems. The root will multiply into a progeny of tubers, in a cluster, in each plant, increasing in size till September and October; the stems may then be cut away, and the produce dug up as required. Or, in November, when they have wholly done growing, it will be proper to take up a quantity, and lay in dry sand under cover to be ready as wanting, in frosty weather, when the others are frozen up in the ground, or affected by the frost. As the roots of this plant are very prolific, the smallest piece of a tuber will grow. In taking up the produce, therefore, all should be cleared out as thoroughly as possible; as any remaining part will come up the following year irregularly, and pester the ground; and would thus continue rising for many years, but not eligible to cultivate for a good crop. To satisfy a demand, therefore, a fresh plantation must be made every year.—See **ARTICHOKE.**

JERUSALEM ARTICHOKE, TO DRESS.—Wash and wipe the artichokes, cut off one end of each quite flat, and turn the other into a point; boil them in milk and water, lift them out the instant they are done, place them upright in the dish in which they are to be served, and pour some



bechamel sauce over them, or with nearly half a pint of cream, thickened with a dessertspoonful of flour mixed with an ounce and a half of butter, and seasoned with a

little mace and some salt. When cream cannot be procured, use new milk, and increase the proportion of flour and butter. Another mode of dressing artichokes is to boil them till tender, press the water well from them, and then mash them with butter, milk, or cream, adding pepper and salt.

JESSAMINE.—The species of this elegant genus are familiar to every one. The stove and greenhouse kinds thrive well in a mixture of sand, loam, and peat; and cuttings of the ripened wood, root freely in the soil or sand under a glass in heat. The hardy kinds thrive well in any common soil, and are easily increased by cuttings under a glass. They are remarkably well adapted for training over an arbour, or against a wall or trellis-work. The white



jessamiuc thrives best in a light warm soil, but it will grow in any ground in a sheltered situation. The yellow jessamine, a shrub growing four or five feet high, blows a yellow flower from July to September. It is not sweet like the white, but very elegant in appearance. Both these sorts may be propagated by suckers.

JESSAMINE PERFUME.—Since the flowers of the jessamine do not yield in distillation either sufficient essential oil, or the flavour is destroyed by heat, the perfume is obtained by steeping the flowers in a very fine oil; a layer of the flowers is laid over the bottom of a hair sieve, and upon the flowers is placed a layer of small and detached pieces of cotton wool, which have been dipped in oil of behn; over the cotton are laid other flowers, and so on alternately, flowers and cotton, until the sieve is full. When these have lain twenty-four hours, the flowers are taken away and the cotton is laid in the same way between layers of fresh flowers, and this operation is repeated, until the cotton is thoroughly impregnated with the perfume of the jessamine; the cotton is then collected, put into a press, and the oil squeezed out of it. If kept as oil, it must be in well stopped bottles, but the usual plan is to add to it at once some very finely rectified spirit of wine, which is as odourless as possible.

JESSAMINE POMADE.—Melt hog's lard, and wash it in clear water, lay it an inch thick in a dish, and strew it over with jessamine flowers; by this means, the scent will be imbibed, and a very fragrant pomade produced.

JEWELLERY, TO BUY.—In purchasing jewellery, always deal with first-rate esta-

blishments, and do not be led away by inferior articles which are advertised or marked at unusually low prices. There is scarcely anything more vexatious than to buy what is helieved at the time to be genuine jewellery, and to discover afterwards that it is only a spurious imitation; whereas jewellery of real value always gives satisfaction as long as it is worn, and may be converted into cash at any moment, should the possessor be necessitated to part with it. When such articles are bought, the purchaser should by way of security, have a bill made out with each article duly specified, and a warranty attached by the person who sells them; so that if any subsequent question arise as to the genuineness of the articles, the purchaser may be enabled to call upon the vendor to make good the depreciation, if any such be proved. Be cautious in buying jewellery at auctions, from private dealers, or through any other irregular channel; as a number of schemes are often set afoot, encouraged by the irresponsibility of the vendors in such cases, by which the purchaser very frequently is made to suffer severely. Thus, cases have recently occurred where so-called private dealers have palmed articles of mock jewellery, plated with gold to a sufficient depth to bear the usual tests, and presenting outwardly all the appearance of genuine articles; such a circumstance could hardly occur with a respectable dealer, because he is in the habit of purchasing his goods from persons to whom an honest reputation is everything, and who dare not attempt to sacrifice their own and their employer's interests by such a nefarious venture.

JEWELLERY, TO CLEAN.—From constant wear, jewellery is apt to become dirty and tarnished, and the process of restoring it to its pristine brightness is very simple. Make a lather of common yellow soap and warm water, wash the articles in this and brush them well, then wipe them dry, and polish them either with a plain leather, or with one upon which a little rouge has been put; after this application, the brilliancy of the jewellery will be restored.

JEWELLERY, TO WEAR.—The wearing of jewellery requires to be guided by taste and regulated by the station which a person occupies in life. Amongst the nobility, and the upper classes generally, whose incomes warrant any amount of outlay, the wearing of jewellery is allowed to any extent; but with persons moving in a humbler sphere, as a tradesman or a shopkeeper, an inordinate display of jewellery is in bad taste, and indeed is apt to excite suspicions as to its genuineness. With all persons of the middle classes and of limited means, a limited display of jewellery is more becoming and graceful. The effectiveness of jewellery greatly depends on the style and chasteness of the design, as in many cases articles of enormous cost will not appear so well to the eye as others of a tenth part of their intrinsic value; simply because there is a heaviness of style and poverty of design which tends, as it were, to dim its lustre and depreciate its value. Consequently, by exercising a due

amount of taste, money can be laid out far more advantageously than when it is only sought to obtain massive and expensive articles.

JONQUIL.—See **NARCISSUS**.

JUJUBES.—A composition for coughs and colds, made with gum arabic and a decoction of the fruit of the jujube-tree. The jujubes of commerce, however, seldom contain any of this decoction, and are made as follows:—Take half a pound of the whitest gum arabic, and having broken it into extremely small pieces, dissolve it with an ounce of fineisinglass, in just sufficient water for the process. In the meantime, make a syrup with half a pound of fine loaf sugar, and half a pint of water; skim this frequently, and when it has become thick, pour it into the dissolved gum, previously strained through a flannel bag, and continue the simmering from time to time, until it is very thick; then set it by to cool, and when the greatest part of the heat has gone off, pour in three or four drops of neroli. Before the syrup has begun to set thoroughly, pour it out upon a marble slab, and roll it to the thickness of about the eighth of an inch. Before it is quite cold, pass a large flat knife underneath the paste, to prevent its sticking; and when cold, either cut the paste into small squares, or into diamonds, and keep them in a tin case.

JULIENNE SOUP.—Slice very fine, in any quantity, according to the number of persons who are to dine, equal parts of leeks, carrots, parsnips, onions, turnips, celery, and potatoes: add an equal proportion of finely chopped lettuce, and a little sorrel and parsley; let these be about half cooked in a saucepan with fresh butter, and then add sufficient beef stock to make the quantity of soup required; boil gently for an hour, then season with pepper and salt as may be necessary, and serve up without straining. If there be no beef stock on hand, make some for the purpose in a separate saucepan.

JULY, GARDENING FOR.—*Kitchen garden:* *Alexanders*, earth up. *Artichokes*, attend to. *Asparagus* beds, clean, leave off cutting from. *Beans*, plant, leave some in production for seed. *Beet*, red, thin. *Green*, white, sow. *Borage*, sow. *Borecole*, plant, prick out. *Brocoli*, prick out, plant. *Cabbages*, plant, prick out seedlings, sow. *Carrots*, thin, sow. *Cauliflowers*, plant. *Celery*, prick out, plant, earth up. *Celeriac*, plant. *Chamomile* flowers, gather. *Chervil*, sow. *Coleworts*, plant. *Coriander*, sow. *Cress*, *American*, sow, earth up where necessary. *Cucumbers*, attend to. *Endive*, plant, sow. *Garlic*, take up as wanted. *Horseradish*, attend to hoeing. *Kidney-beans*, attend to, sow. *Lavender*, gather. *Leeks*, weed, &c., and plant. *Lettuces*, plant, sow, leave for seed. *Marigolds*, flowers, gather. *Marjoram*, gather for drying. *Melons*, attend to. *Mint*, plant. *Mushroom* bed, attend to, make spawn, collect. *Onions*, weed, &c., press down leaves, sow. *Parsley*, sow. *Parsnips*, weed. *Peas*, sow, hoe advancing, leave for seed. *Peppermint*, gather. *Pompions*, attend to. *Potherbs*, gather for drying and distilling. *Radishes*, sow. *Rape*, edible rooted, sow. *Salsify*, thin. *Savoy*, plant. *Salad-*

ing (small), sow. *Spinach*, sow, hoe, and thin ground between plants. *Succory*, sow. *Turnips*, sow. *Wormwood*, plant.

General remarks.—During this month take advantage of the showery weather to propagate by bulbs, shoots, slips, and offsets. Thin and hoe the ground, and pay particular attention to the extermination of weeds. Support advancing plants, where necessary, with stakes. Take advantage of the fine weather to water, as far as practicable.

Flower garden.—Sow a few hardy and half-hardy annuals for succession. Propagate by cuttings, such plants as are proper for the purpose, as they go out of flower. Pipe and lay pinks and carnations towards the end of the month. Transplant the seedling auriculas which were sown last year, and also the seedling polyanthus. Transplant the perennial and biennial seedlings which were not done last month to remain till October. Take up all bulbs and other tuberous roots, dry them in the shade, and remove them to boxes or drawers in the store-room; wrap the finer sorts in paper. *Hotbeds and pits.*—Put pots of carnations and pink pipings in gentle heat, it will prevent their sticking. Do not forget to give head-room to your balsams and other tender annuals. Attend to pots of cuttings and seedlings; also to young stove plants put into this department for more rapid advancement. *Greenhouse.*—As soon as the mulberry comes into leaf, remove the plants to a fit situation in the open air. *Dry stove.*—Give abundance of air, night and day, and be moderate as to water. Cease to water bulbs soon after they have done flowering; let them go slowly into a state of hybernation, and then take them out of the pots and dry them.

General remarks.—Mow, weed, hoe, rake, thin, stir, and dress and maintain as complete an appearance of polish and high keeping as possible. Walk round the garden frequently, and examine everything minutely, and reflect on what can be done to promote its growth and beauty. Water and roll any new-laid gravel, to combine it properly with the rest. Dress, roll, and mow lawns and turf in every form. Search out insects and destroy them. Shade, shelter, and afford every kind of protection to plants coming into flower.

JULY, THINGS IN SEASON.—*Fish:* barbel, brill, carp, cod, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnards, haddock, herrings, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns, salmon, skate, soles, tench, thornback, trout.

Fruit.—Apples: codlin, jennetting, Margaret, summer pear-main, summer pippin. Apricots, cherries, currants, damsons, gooseberries, melons, nectarines, peaches. Pears: catharine, green-chisel, jargonelle, musk. Oranges, pine-apples, plums, raspberries, strawberries.


Meat.—Beef, grass-lamb, mutton, veal, buck-venison.

Poultry and Game.—Cbickens, ducks, fowls, green-geese, leverets, pigeons, plovers, rabbits, turkey-poults, wheat-ears, wild pigeons, wild rabbits.

Vegetables.—Artichokes, asparagus, balm,

beans, carrots, cauliflowers, celery, chervil, cucumbers, endive, fuchsia, herbs of all sorts, lettuce, mint, mushroom, peas, potatoes, purslane, radishes, romaine, salads of all sorts, salsify, sorrel, spinach, turnips.

JUMBLES.—Cakes, made as follows: half a pound of flour, half a pound of sugar, six ounces of butter to be rubbed into the flour; one ounce each of sweet and bitter almonds pounded. This quantity, wetted with one egg well beaten, dropped in small lumps on a tin, will bake in a few minutes in a hot oven. A little powdered white sugar may be strewn over the surface, before they are put into the oven.

 Flour, 1lb.; sugar, 1lb.; butter, 6ozs.; sweet almonds, 1oz.; bitter almonds, 1oz.; egg, 1.

JUNE, GARDENING FOR.—*Kitchen garden:* *Alexanders*, earth up, *Artichokes*, weed, &c. *Asparagus* beds, clean, &c. *Beans*, plant, hoe, &c., advancing crops. *Beets*, thin. *Borecole*, plant, sow, prick out. *Brocoli*, sow, prick out, plant. *Basil*, plant. *Cabbages*, sow, prick out, plant, earth up. *Capsicum*, plant. *Carrots*, thin, &c. *Cauliflowers*, prick out; seedlings, earth up, &c.; leave for seed. *Celery*, sow, plant, earth up advancing. *Celeriac*, plant. *Coleworts*, sow for, plant. *Cucumbers*, sow, plant, in forcing attend to. *Cardoons*, thin, plant out. *Coriander*, sow. *Cress*, *American*, sow, water, plant, earthing up, attend to. *Endive*, sow, plant. *Fennel*, plant. *Finochio*, sow, earth up advancing crops. *Garlic*, gather for use. *Herbs*, gather for drying and distilling. *Jerusalem artichokes*, hoe, &c. *Kidney beans*, dwarfed, sow, runners, attend to. *Leeks*, thin, &c., transplant. *Lettuce*, sow; plant, leave for seed. *Melons*, plant out. *Mint*, plant. *Onions*, thin, &c., transplant into deficiencies. *Parsley*, sow. *Hamburg ditto*, thin. *Parsnips*, thin. *Peas*, sow, attend to advancing crops. *Potatoes*, hoe. *Pumpkins*, plant. *Radishes*, sow. *Rampion*, thin. *Sage*, plant. *Salsify*, thin. *Savoy*, plant, prick out. *Scurvy-grass*, sow seeds, attend to, gather. *Salading (small)*, sow. *Spinach*, sow, thin advancing; stir ground between crop in rows. *Succory*, sow. *Tarragon*, plant. *Thinning*, attend to. *Tomatoes*, plant out. *Turnips*, sow, thin advancing. *Turnip cabbage*, sow, plant, attend to their watering and weeding. *Wormwood*, plant.

General remarks.—Give shelter, shade, and protection to every kind of advancing crop. Water where necessary, and stick and top beans, peas, &c.; hoe, thin, and stir the surface among every description of crop wherever necessary. Check the ravages of birds, vermin, and insects, by searching well for them, and destroying them without delay. *Flower garden:* propagate carnations by layers, and pipings; double sweet williams and pinks by layers and cuttings, or slips; perennial fibrous-rooted plants, by cuttings of the stalks. Transplant the large annuals from the seedling bed to the places where they are to remain; let this be done in showery weather if possible. Take up all bulbs, ranunculus and anemone roots, &c., as the flowers and roots decay. Water the delicate plants, if the weather prove dry;

give a moderate watering in the evening, but never in the middle of the day. Sow some hardy annuals, such as ten-week stocks, Virginia-stocks, &c. Plant out China asters, Chinese hollyhocks, ten-week convolvulus, &c.; but let each root have a ball of earth around it. Turn the African and French marigolds from their lower straggling shoots, that they may present a neat and upright appearance. Turn the ebrys-anthemiums, which are apt to branch too near the root, and stake them neatly. Plant out carnations and pink seedlings into their appointed places. *Holbeds and pits.*—Attend to cuttings from whatever department. If you are endeavouring to flower the more delicate aquatics, see to the keeping up of a regular heat. *Greenhouse.*—This will now be filled with pots of tender annuals, which only require shifting now and then till of a certain growth.

General remarks.—Eradicate all weeds the moment they appear; keep the surface of the ground always fresh, and rather rough, never smooth and battered; it is better to have little elods and knots of earth, as they make a variety of light and shade; and are, besides, more favourable for the admission of air, heat, and moisture to the roots. Destroy insects; cut out broken stalks and diseased parts of plants. Gather flowers neatly with a knife, and so as not to disfigure the plants. Gather in general from the reserve-garden, so as not to disturb the borders. Attend to the mowing and dressing of the lawn, according as the weather may be fine or showery. Weed and roll gravel walks in moist weather. When dry, and the gravel becomes loose, water and roll.

JUNE.—THINGS IN SEASON. *Fish.*—Carp, eel, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnards, haddocks, herrings, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns, salmon, salmon trout, skate, smelt, soles, sturgeon, tench, trout, turbot, white bait, whittings.

Fruit.—Apples: John apple, stone pippin, golden russet. Apricots. Cherries: duke bigaroon, blackheart. Currants, gooseberries, melons. Pears: winter green. Strawberries. *Forced fruit.*—Grapes, neectarines, peaches, pines.

Meat.—Beef, grass-lamb, house-lamb, mutton, pork, veal, buck-venison.

Poultry and Game.—Chickens, ducklings, fowls, green-geese, leverets, pigeons, plovers, pullets, rabbits, turkey-poults, wheatears, wood-pigeons.

Vegetables.—Angelica, artichokes, asparagus, beans, beet (white), cabbage, carrots, cauliflowers, chervil, cucumbers, endive, herbs of all sorts, leeks, lettuce, onions, parsley, peas, potatoes, purslane, radishes, salad of all sorts, spinach, turnips, vegetable marrow.

JUNIPER BERRY.—A strong diuretic, combined with a tonic principle. The oil of juniper, in doses of from two to six drops, is a more powerful diuretic than any other known. The diuretic property of juniper is wholly owing to the presence of the essential oil given out by this berry in distillation.

JUNKET.—A preparation common in Devonshire, made as follows:—Put warm milk into a bowl; turn it with rennet; then put some scalded cream, sugar, and cinnamon on the top, without breaking the curd; which put into a close uet, and hang it up, for the purpose of allowing the milk to drain from it, and to bring it into shape. Or, put some new milk into a basin, add to it a little rennet, and, if approved, a little brandy or rum may also be added: stir the whole well till perfectly mixed. Place it near the fire, or on a warm stove or hearth, until turned, but avoid keeping it too hot, or it will not turn properly. When turned, put sugar and grated nutmeg or cinnamon on the top, and clotted cream, without breaking the curd; then serve.

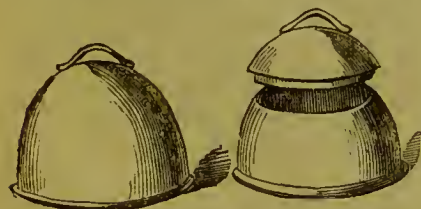
JURY.—With the exceptions hereafter specified, the following persons are qualified to serve on juries, in the county, riding, or division, where they respectively reside. 1. Every man between the age of twenty-one and sixty years, residing in England, having, in his own name, or in trust, £10 per annum of clear yearly income, arising from lands and tenements; or rents amounting to the clear yearly value of £10. 2. Every man having £20 a year clear, from lands or tenements held by lease for twenty-one years or upwards, or for any term determinable on any life or lives. 3. Householders assessed to the poor rate, or to the inhabited house duty, in the county of Middlesex on the value of £30; in any other county, £20. Lastly, persons occupying any house containing not less than fifteen windows. The following are exempt from serving on all juries and inquests whatever. Peers, judges, counsellors, attorneys, proctors, coroners, gaolers, and keepers of houses of correction; clergymen in holy orders; Roman Catholic priests, having taken the oath required by law; dissenting ministers, whose places of worship are registered, and who follow no secular occupation except that of school-master; police magistrates and commissioners of the metropolis; officers of the army and navy on full pay; physicians, surgeons, and apothecaries, duly licensed, and actually practising; servants of the royal household, pilots licensed, and masters in the buoy or light service; officers in the customs, post-office, and excise; officers of courts of justice actually exercising the duties of their offices; sheriffs' officers, high constables, and parish clerks. After serving and obtaining the sheriff's certificate, persons are free from again serving on juries, for certain periods; in the counties palatine, or the principality of Wales, or in Hereford, Cambridge, Huntingdon, or Rutland, for one year; in the county of York, for four years; in any other county except Middlesex, two years. The names of the jurors summoned, being written on tickets, are put into a box, and, when each cause is called, twelve of the persons whose names are first drawn are sworn on the jury, unless absent, challenged, or excused, or unless a previous view of the subject in issue shall have been thought necessary by the court; and then the jurors, who have had the view, shall be

sworn prior to any other jurors. On the jurors' names being called, they may be challenged or objected to by the parties, as improper persons to form the jury. Challenges are of two kinds; challenge to the array, and challenge to the pole. Challenge to the array is an exception at once to the whole panel, which may be on the ground of partiality, or default in sheriff, or his deputy who arrayed the panel. Or the array may be challenged because one of the parties is an alien, so entitled to a jury of one-half foreigners. Challenges to the pole are exceptions to particular individuals, and may be made on several accounts. 1. That the juror is an alien. 2. That he is not duly qualified according to the statute. 3. That he has been an arbitrator in the cause, has received money for his verdict, or is related to, or employed by one of the parties. 4. That he is infamous or degraded in law. 5. Challenges may be made to the favour, as where the party has no direct cause of challenge, but objects only to some suspicious circumstance, as acquaintance or the like, the validity of which must be determined by two indifferent persons, chosen by the court. And lastly, a juror may challenge himself, on the ground of his title, office, profession, or some other cause of exemption, before enumerated. Persons summoned to serve on juries in any of the inferior courts of record in London, or in any other liberty, city, borough, or town, not attending, shall forfeit not more than forty shillings, and not less than twenty shillings, unless the Court be satisfied with the cause of absence. In the superior courts the lowest fine is £10 for non-attendance without sufficient reason, and the highest fine £50.

K.

KALE, CULTURE OF.—Kale, or colewort, is a species of sea-cabbage; it is propagated both from seed and slips of the root; the first is by far the best mode, for although it may be obtained from slips with greater certainty, yet the plants arising from seed are the strongest and longest lived. The seed may be inserted in drills from October to the commencement of April, but the best time for inserting it is during January, February, or March. It is by much the best mode to leave the plants where raised, and with that intent to guard against failure, inserting the seed in patches of six or twelve seeds, each six inches apart, and the patches two feet asunder. If, however, they are intended for transplanting, the seed may be sown in drills twelve inches asunder; in either case it must not be buried more than two inches below the surface; and it is a good plan, previously to inserting the seed, to bruise the outer coat without injuring its vegetating power, as by this treatment the germination is accelerated. The plants will, in general, make their appear-

ance in four or five months, never sooner than six weeks; but, on the other hand, the seed will sometimes remain twelve months before it vegetates. The best time for increasing it by slips is in March. Rooted offsets may be detached from established plants; or their roots, which have attained the thickness of the third finger, may be cut into lengths, each having at least two eyes. The cuttings must be inserted in an upright position, two or three inches beneath the surface. It is best to plant two together, to obviate the danger of failure, at two feet apart, to remain. The bed should be laid out three feet wide, and a two-foot alley between every two. If the months of June and July prove dry, the beds should be plentifully watered. The seedlings require no other attention during the first summer than to be kept free from weeds, and if the plants come up too numerous, to be thinned to five or six in each patch. When their leaves have decayed, and been cleared away about November, they must be earthed over an inch or two with dry mould from the alleys, and over this about six inches depth of long litter be spread, and thus left during the winter. In the following spring, the litter is to be raked off, and a small portion of the most rotten dug into the alleys. When the plants have perfectly made their appearance, they must be thinned, leaving the three strongest in each patch; those removed being planted at similar distances if required. In the second winter, the earthing-up must be increased to five or six inches over the crowns, and the covering of litter performed as before. In the third spring, the litter being removed, and some dug into the alleys, as before, about an inch depth of drift sand or cool ashes must be spread regularly over the surface. The sprouts may now be bleached and cut for use. In November, as soon as the leaves are decayed, the beds being cleared of them, the coating of sand and ashes removed, and gently stirred with the asparagus fork, they must be covered with a mixture of three parts earth from the alleys, and one part of thoroughly decayed leaves, to the depth of three or four inches. The major part of this is to be removed in the following spring, the beds forked, and the covering of sand removed, the routine of the cultivation existing during the continuance of the beds.



In blanching, pots are much to be preferred to any other covering. Common flower-pots of large dimensions may be employed, the hole at the bottom being stopped with a piece of tile and clay, so as to exclude every ray of light. A kind of pot for blanching,

as represented in the engraving, is very commonly used. They are of earthenware, twelve or eighteen inches in diameter, and twelve high. Previous to covering the stools with the pots, the manure laid on in the winter must be removed; and the operation should commence at the close of February, or at least a month before the shoots usually appear, as the shelter of the pots assists materially in bringing them forward. In four or six weeks after the plants are covered, they should be examined, and as soon as they appear three or four inches high, they may be cut. In order to prolong the season of production, the plants should be raised annually, so that every year a cutting may be had from a yearling crop, which comes in much later, and consequently succeeds, in production, the old established roots. The shoots should be cut while young and crisp, not exceeding five or six inches in height; the section to be made just within the ground, but not so as to injure the crown of the root. When the cutting ceases, all covering must be removed, and the plants allowed to grow at liberty. *For producing seed*, a stool, which has not been cut from, or even covered at all for blanching, must be allowed to run in spring. Unlike the generality of vegetables, the shoots of forced sea kale are always more crisp and delicate than those produced naturally. Those plants will not do for forcing a second time, which have been forced in frames; consequently, a small bed should be sown every year for this purpose, so that a succession of plants may be annually secured.

KALE BOILED.—Wash, trim, and tie the kale in bunches, and throw it into plenty of boiling water with some salt in it. When it is perfectly tender, lift it out, drain it well from the water, and send it to table with melted butter. It is improved by being served up on toast, as asparagus. About twenty minutes will boil it; a minute or two less for persons who like it crisp.

KALE STEWED.—Boil the kale for ten minutes in salt and water; drain it well, and put it into a saucepan with as much good brown gravy as will nearly cover it; stew it gently for ten minutes, or until it is very tender, and send it to table in the gravy very hot. Another excellent mode of serving this vegetable is, to boil it in salt and water, and to pour over it plenty of rich white sauce after it is dished.


KALEIDOSCOPE.—A pleasing philosophical toy, which may be formed as follows;—Two slips of silvered glass from six to ten inches in length, and from an inch to an inch and a half wide, and rather narrower at one end than the other, are joined together lengthwise, by one of their edges, by means of a piece of silk or cloth glued on their backs; they are then placed in a tube of tin or pasteboard, blackened inside, and a little longer than is necessary to contain them, and are fixed by means of small pieces of cork, with their faces at any angle to each other that is an even aliquot part of four right angles (as the $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c.) The one end of the tube is then closed with an

opaque screen, or cover, through which a small eyehole is made in the centre; and the other end is fitted, first with a plate of common glass, and at the distance of about an eighth of an inch, with a plain piece of slightly ground glass parallel to the former: in the intermediate space or cell are placed the objects to form the images. These consist of coloured pieces of glass, glass heads, or any other coloured diaphanous bodies, sufficiently small to move freely in the cell, and to assume new positions when the tube is shaken or turned round. A tube so prepared presents an infinite number of changing and symmetrical figures, no one of which can be exactly reproduced. This toy is so easily constructed, is so very inexpensive, and at the same time so capable of affording an almost inexhaustible fund of amusement to the young, that the construction of it is well worth the trial, as affording a double gratification. Any common tube of tin or pasteboard may be used, and strips of glass smoked on one side will answer for mirrors.

KENNEL.—The feeding and lodging of dogs, and the consequent management of the kennel, is a matter of the greatest importance. It is essential that the kennel should be in a healthy situation; and that it should be dry, warm, and airy. Cleanliness is also worthy of the strictest attention, and should never be wanting; neglect in this particular frequently inducing many cutaneous and other diseases, from the noxious exhalations which are suffered to arise. In the feeding of dogs, a mixture of both animal and vegetable substances may be considered as its most proper food; the proportions of each are best determined by the exertions of the body, for animal food affords most nutriment; so when the bodily exertions are great, as those of hounds, greyhounds, pointers, &c., in their working season, then a large proportion of animal matter forms the best food. On the contrary, when the season of rest arrives, milder and less nutritious food (but such as is equally bulky) is required; consequently, at this period, a larger proportion of vegetable matter is equal to the wants. An entire vegetable diet, however, does not always agree with dogs which have been long fed with flesh; neither is a long continuation of any one kind of food so wholesome as an occasional change. The quantity, as well as the quality of food is also to be considered, as well as constitutional peculiarities, for some require more than others. When dogs feed together, some will eat slowly, and some will devour three times the quantity in the same time which sufficed for the meal of the former; consequently, unless the feed regulates the operation, one-half of the dogs will be gorged and the other half underfed. Of the animal substances used as food for dogs, the entrails of the larger kinds, as those of sheep and cows, are common. Where a limited number only of dogs are kept, bullocks' and sheep's paunches boiled down, and the liquor poured over bread-rasplings or ground meal of any kind, form excellent food. Greaves, also, first soaked in cold water, and then mixed with a thick mess of meal of any kind, form

a convenient food for pointers. Of the vegetable substances from which dogs can receive nourishment, the list extends to almost every edible plant; and though dogs will not voluntarily eat all vegetables, yet the number they will take is very considerable, and may be increased by custom.—**See DOGS, MANAGEMENT OF.**

KENTISH CAKE.—Mix a tablespoonful of salt with half a peck of sifted dry flour, half an ounce of cinnamon, a quarter of an ounce of nutmeg, a drachm of cloves, and one of mace, all finely beaten and sifted with the salt. Add three-quarters of a pound of sugar; and well work, by a little at a time, a pound and a half of fresh butter into the flour; it will take three hours in working up. Then put in a quart of cream, a pint of ale yeast, a gill of white wine, the yolks of eight eggs, the whites of four, and a gill of rose water. Mix the whole with the flour, and knead them well together. Lay the paste for some time near the fire; then put in a pound of raisins stoned and minced, and three pounds of currants; bake the cake for three hours, in a gentle oven. When done, frost it on the top with rose-water and the white of an egg beaten together; sift over it plenty of powdered loaf sugar, and set it in the oven to dry.

 Salt, 1 tablespoonful; flour, $\frac{1}{2}$ peck; cinnamon, $\frac{1}{2}$ oz.; nutmeg, $\frac{1}{2}$ oz.; cloves, 1 drachm; mace, 1 drachm; sugar, $\frac{3}{4}$ lb.; butter, 1 $\frac{1}{2}$ lbs.; cream, 1 quart; ale yeast, 1 pint; white wine, 1 gill; eggs, 8 yolks, 4 whites; rose-water, 1 gill; raisins, 1 lb.; currants, 3 lbs.

KETCHUP, MUSHROOM.—Gather the broad flapped and red gilded mushrooms before the sun has discoloured them; wipe, and break them into an earthen pan. To every three handfuls, throw in one handful of salt; stir them two or three times a day till the salt is dissolved, and the mushrooms are liquid. Bruise the remnants, set the whole over a gentle fire till the essential properties are extracted; strain the hot liquor through a fine hair sieve, boil it gently with allspice, whole black pepper, ginger, horseradish, and a few shallots, with two or three laurel leaves. After simmering for some time, and well skimming, strain the liquor into bottles; when cold, close the bottles with cork and bladder. If again boiled at the end of three months with fresh spice, and a stick of sliced horseradish, it will keep very well for at least a year; but unless this be done, it will seldom keep so long.

KETCHUP, OYSTER.—Take a number of oysters, according to the quantity of ketchup which is to be made. Beard them, and boil them in their liquor, strain, and pound them in a mortar; boil up with some spring water the beards of the oysters; and straining it to the first oyster liquor, boil the pounded oysters in the mixed liquors, with bruised mace and pepper. When thoroughly boiled, set it to cool, then pour it off into bottles, and cork securely. This ketchup will keep good for a long time.

KETCHUP, WALNUT.—Put any number of walnuts you please into a jar, cover them with cold strong alagar, and tie them closely

down for twelve months. Then take out the walnuts, and to every gallon of liquor put two heads of garlic, half a pound of aneovies, a quart of red wine, and an ounce each of mace and cloves, long, black, and Jamaica pepper, and ginger. Boil altogether till the liquor be reduced to half the quantity, and the next day bottle it for use.

KETTLE.—A well-known culinary implement for boiling water. They are constructed of various materials, according to the uses to which they are to be put. For kitchen purposes strong iron kettles are the most suitable, as better able to resist the extraordinary amount of heat to which they are submitted, and the rough usage to which they are subjected. When water is required to boil quickly, a kettle made of tin will be found the best. For parlour use, bright copper kettles are generally used; and in order to keep these in a state of brightness, they should not be put over the fire for the purpose of boiling the water, but the water which has been boiled in another kettle should be transferred into them. When kettles have been long submitted to the action of heat, the handles are frequently too hot to touch; to obviate this disadvantage handles are made of non-conducting materials, such as bone or glass, so that they may be handled without any inconvenience. *To clean the inside of a kettle*, fill it with water, and add to it a drachm of sal-ammoniac; let it boil for an hour, when the fur, or petrified substance formed on the metal, will be dissolved, and can be easily removed. "In boiling a kettle, care must be taken to put on the lid closely, so as not to leave the smallest crevice. If the lid is in the least broken or bent, it is best to obtain a new one; otherwise the water is liable to be smoked and rendered unfit for use, communicating a most unpleasant flavour to the tea, coffee, &c. The furring to which kettles are subject is caused by the deposits of water repeatedly boiled; the simplest precaution will prevent this unpleasant accumulation. Place in the kettle a clean oyster-shell, which, by attacking the particles of stone or lime deposited by the water, will have the effect of keeping both the kettle clean and the water pure.

KEYS.—The care of keys is no unimportant consideration, when it is reflected how much inconvenience and trouble are frequently caused when one of these is missing or broken. In order that keys may be kept together, they should all be fastened on to one ring, and so that the hand may be placed upon them at any moment they should be invariably deposited in a certain spot, known only to yourself; the best way, perhaps, is to lock them up and keep the key under which they are locked up, in your purse or pocket-book. When a key is lost beyond all hope of return, and if it belongs to any receptacle in which articles of value and importance are kept, it is best to have a new lock, so that in the event of the key having been abstracted for dishonest purposes, this design may be effectually frustrated. When there is something amiss with a key so that it will not turn with ease, do not be impatient and endeavour to force it to turn, as

this will in all probability break the key and injure the lock; but withdraw the key and examine both it and the lock, and then, after removing any obstruction, make several gentle attempts, and success will most likely be the result. Do not give children keys to play with which are in ordinary use, as they are almost sure to lose them, and a search of some hours will thus be entailed. When there are a great number of keys, and many of them are similar in appearance, they should be distinguished by small labels with their designations marked on them.

KID BOOTS, TO CLEAN.—Rub the boots over with a moistened sponge, and then apply to them a blacking made as follows: Four ounces of glue, one ounce of soft soap, half a pound of logwood shavings, a quarter of an ounce of isinglass, and one drachm of indigo. Simmer them over the fire till reduced to one-half, then apply.

KID CUTLETS.—Prepare the outlets; lard them; put them in a marinade made of vinegar and water in equal quantities, slices of onions, cloves of garlic cut in two, juniper-berries, salt, pepper, cloves, nutmeg, and ginger. Stew the outlets gently in this with two tablespoonfuls of stock, onions, bunch of herbs, and carrots sliced. When done enough, glaze them, and serve with a piquant sauce.

KID GLOVES, TO CLEAN.—Wash the hands thoroughly clean, then put on the gloves and wash them, as though you were washing your hands, in a basin containing spirits of turpentine, until quite clean; then hang the gloves up in a warm place, or where there is a free current of air, which will carry off all the smell of the turpentine. Or, make a strong lather with eurd soap and warm water, in which steep a small piece of new flannel. Place the glove on a flat, clean, and nonyielding surface, such as the bottom of a dish, and having thoroughly soaped the flannel (when squeezed from the lather), rub the kid till all dirt be removed, cleaning and re-soaping the flannel from time to time. Care must be taken to clean every part of the glove, by turning it in every direction. The gloves must be dried in the sun or before a moderate fire, and when quite dry they must be gradually pulled out; they will then look as well as new. *To clean coloured kid gloves*, have ready on a table a clean towel folded three or four times, a saucer of new milk, and another saucer containing a piece of brown soap. Take one glove at a time, and spread it smoothly on the folded towel. Then dip in the milk a piece of flannel, rub it on the soap till it receives a tolerable quantity, and then with the soaped flannel commence rubbing the glove. Begin at the wrist and rub lengthwise towards the ends of the fingers, holding the glove firmly in your right hand. Continue this process until the glove is cleaned all over with the soap and milk. When done, spread them out, and pin them on a line to dry gradually. When nearly dry, pull them out evenly, the cross way of the leather. When quite dry, stretch them on your hands.

KID, ROASTED.—Raise the skin of kid, lard it, and put it in a marinade, as in the

preceding. Let it remain for eight days; then drain it; wrap it up in oiled paper; roast it; and serve with piquant sauce.

KIDNEY BEEF, FRIED.—Slice the kidney rather thin, after having stripped off the skin and removed the fat; season it with pepper, salt, and grated nutmeg, and sprinkle over it plenty of minced parsley, or equal parts of parsley and shalots chopped small. Fry the slices over a brisk fire, and when nicely browned on both sides, stir among them a teaspoonful of flour, and pour in by degrees a cupful of gravy, and a wineglassful of white wine; bring the sauce to the point of boiling; add a small piece of fresh butter, and a tablespoonful of lemon-juice, and pour the whole into a hot dish, garnished with fried bread.

KIDNEY BEEF, MINCED.—Chop up the kidney with some parsley and shalot, mix all well together, season with pepper and salt, dredge a little flour over it, and put it into a stewpan with some butter; let it stew until tender, and then add a tea-cupful of rich gravy, and a glassful of white wine.

KIDNEY, BROILED.—Split sheep's kidneys, open lengthwise without dividing them, strip off the skin and fat, run a fine skewer through the points and across the back of the kidneys, to keep them flat while broiling, season them with pepper or cayenne, lay them over a clear brisk fire, with the cut sides towards it; turn them in from four to five minutes, and in as many more, dish and serve them quickly, with or without sauce.

KIDNEY DUMPLINGS.—Make the dumplings in the usual way, put into each a sheep's kidney well washed, and seasoned with pepper and salt; boil them tied in a cloth, and serve them very hot.

KIDNEY, FRIED.—Fry gently in a little good butter a dozen slices of bread, of uniform shape and size, trimmed free from crust, cut half an inch thick, about two inches and a half wide, and from three to four in length; lift them out, and keep them hot. Split quite asunder six fine fresh kidneys, after having freed them from the skin and fat; season them with salt and cayenne, arrange them evenly in a clean fryingpan, and pour some clarified butter over them. Fry them over a somewhat brisk fire, dish each half upon one of the slices of bread, make a sauce in the pan from gravy and a little ketchup; pour it around the slices, and serve the kidneys instantly.

KIDNEYS, DISEASE OF.—These, like the other organs of the body, are liable to many diseases, such as inflammation, enlargement, and softening; but as these are cases that do not frequently occur, we confine our observations to the affections of these organs, a class of ailments much more common than the diseases of them. Pain in the region of the kidneys is very common, so frequent, indeed, that there are few of either sex who are not more or less subject to such symptoms. Sometimes the pain proceeds from the imperfect manner in which the secretion is carried on, from the presence of sand or

gravel, and occasionally from a fall and injury to the part, or from the application of cold. But however severe the pain may be, or from whatever cause it may arise, in no ailment of the body is *heat* more beneficial, or the hot bath of such immediate and permanent good.

In all affections of the kidneys, then, the patient should at once use the hot bath, and remain in it for not less than ten minutes, using gentle friction over the part both before and after the bath, and, if necessary, repeating the same practice every day. A draught, composed of thirty drops of spirits of nitre, and the same quantity of the tincture of henbane, hyoscyamus, in a little tea or gruel, may be taken at bed-time; and when the pain is severe, a mustard and flour poultice, applied for a quarter of an hour; or the loins may be rubbed with an embrocation made with equal parts of opodeldoc, oil of amber, and spirits of turpentine. At the same time, in all affections of the kidneys the patient should drink largely of linseed tea.

KING'S EVIL.—Scrofula; so called because this was the disease formerly supposed to be cured by the imposition of the royal hand.—See SCROFULA.

KINO.—In medicine, a powerful astringent. It is used externally to ulcers, to give tone to them when yielding and discharging foul and thin matter. It is used internally in the same cases as catechu. Dose of the powder, from ten to thirty grains; of the tincture, from one to two drachms; of the compound powder, from ten to twenty grains; of the infusion, from half an ounce to an ounce and a half.

KIPPER.—The name given to salmon, prepared as follows: Cut the fish up the back, and take out the bone; wipe it very clean with a cloth, score it, and put a handful of salt on each side, and let it lie for three days; then hang it up to dry, and it will be fit for use in two days; when required for eating, broil slices of it, and flavour with butter and pepper.

KIRCHWASSER.—A spirit distilled from cherries. It is a dangerous liquor, if taken to excess, as it contains much of the principle of prussic acid; but in small quantities, and mixed with water, it is a good stomachic. Infuse for four days in two quarts of spirit of wine, half a pound of kernels of cherries bruised; distil until rather less than the two quarts of spirits have come over; add twelve drops of neroli, two quarts more of spirit of wine, and two quarts of water. This will be improved, if about two ounces of the bruised kernels of cherries be infused in half a pint of spirit of wine for a fortnight, and the infusion added.

KISSES.—A confection made as follows: Beat the whites of four eggs till they stand alone, and then beat in, gradually, a pound of the best white sugar, sifted and powdered; add twelve drops of the essence of lemon, and beat the whole very hard. Having laid a sheet of white paper on the bottom of a square tin pan, drop on it, at equal distances, a small spoonful of stiff currant

jelly, and then, with a large spoon, pile up some of the white of egg, and sugar on each lump of jelly, so as to cover it over; let this be done as evenly as possible, so that the kisses may be round and smooth; they must then be placed in a cool oven, and as soon as they are coloured, taken out, and have the underneath parts placed together. Lay them lightly on a sieve, and dry them in a cool oven, till they stick closely to each other, so as to form a ball.

KITCHEN, ARRANGEMENT OF.—The following requirements in connexion with the kitchen, are essential. It should be sufficiently large, and the parts conveniently distributed. It should be lofty and well ventilated. There should be good light, especially in those places where the cooking is immediately going on. It should be well supplied with water and fuel. There should be easy access to it, without passing through the house. It should be so placed that the odour of cooking cannot be perceived in the house; nor should the latter be incommoded and disturbed by the noise of the culinary operations and the servants. The appendages of the kitchen, as scullery, pantry, store-room, fuel closet, &c., should be arranged in convenient proximity. The orderly arrangement of the kitchen itself, is a matter of the greatest importance. Every utensil and article of use should be placed so that the hand may be put upon it immediately. Kitchen utensils ought to be provided in proper abundance, as well as of suitable kinds, rather numerous than otherwise, to save the distraction occasioned by scanty supplies. A digester, meat-screen, salting-trough, meat-safe, bain-marie, and a few other small articles, are indispensable in a family where both economy and comfort are studied; and speedily repay their cost by the saving of fuel, labour, and provisions. Such articles may be bought on the graduated scale, suited to the size and circumstances of the family. The price, to a young housekeeper, of a couch or a looking-glass, would obtain all these kitchen articles so subservient to good cookery and economy. The importance of cleanliness must be insisted on; and is indeed one of the first virtues of plain cooking. Cleanliness of the most scrupulous kind must be particularly observed with regard to all culinary utensils; all saucepans, kettles, gridirons, frying-pans, spits, skewers, &c. to be placed away clean, and kept well tinned and free from rust. Pickle-jars, preserve pots, casks, troughs, paste pans, &c. to be wiped, scraped, or washed before they are put away. Great attention to be given to keep pudding-moulds and cloths, tapes, jelly-bags, tammy-cloths, sieves, &c. clean, sweet, and dry. Kitchen cloths to be washed every day after dinner, wood-ashes are best for this purpose. Cleanliness is applicable with equal force to provisions about to be dressed. All should be thoroughly trimmed, wiped, and washed. Attention, also, to be given to careful skimming, straining, withholding the sediment, lees, &c. All refuse and noxious matters of every kind should be placed out of reach, and never suffered to accumulate; the injurious

effects attending the neglect of this important particular are incalculable.—See **COOK, DUTIES OF; COOKERY CLOCK; KITCHEN BOILER; KITCHEN RANGE, &c.**

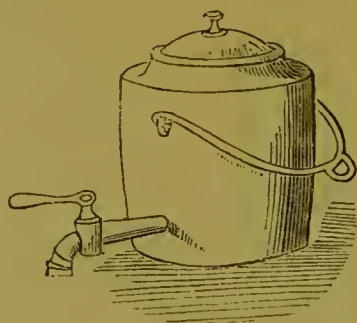
KITCHEN BOILERS.—These culinary

Fig. 1.



implements are necessary when large joints are to be cooked, when soup or other liquids are to be made in large quantities, or when an unusual supply of hot water is required. They are constructed either without a lid and tap, as in *fig. 1*, or furnished with both these adjuncts, as shown in *fig. 2*. One of the chief recommendations of this culinary implement is, that it spares the expense and trouble of lighting the copper fire when a large supply of hot water only is required, and in the

Fig. 2.

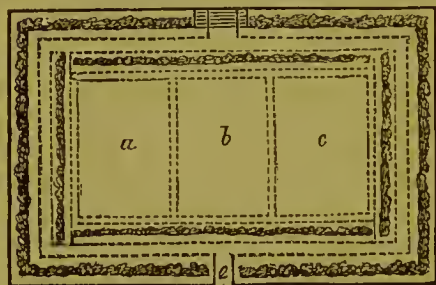


majority of cases answers the purpose equally well.

KITCHEN GARDEN.—The arrangement and laying out of a kitchen garden, embraces a variety of considerations, some relative to local circumstances, as situation, exposure, soil, &c., and others depending on the skill of the artist, as form, laying out the area, water, &c.; both of these require the utmost deliberation. The situation of the kitchen garden should be as near the house as is compatible with convenience and sightliness; in a word it should be near but concealed. The situation should not be so elevated as to be exposed to boisterous and cutting winds, nor should a very low situation be chosen if it can be avoided. The exposure should be towards the south, and the aspect at some point between south-east and south-west, the ground sloping to these points in an easy manner. An open aspect to the east, is a consideration of much importance in laying out a kitchen garden; for when the sun, at its rising, can reach the garden,

and continue a regular influence, increasing as the day advances, it has a gradual and most beneficial effect in dissolving the hoar frost, which the preceding night may have scattered over young buds, leaves, and blossoms. On the contrary, when the sun is excluded from the garden till about ten in the morning, and then suddenly bursts in upon it, with all the force derived from considerable elevation, the exposure is detrimental, particularly in the spring months, for the powerful rays of heat at once melt the icy particles, and, immediately acting on the moisture thus created, scald the tender blossoms, which are in consequence nipped and killed. *The extent of the kitchen garden must be regulated by that of the place, of the family, and of their style of living.* To assist in determining the extent, it may be observed, that an acre with wall trees, hotbeds, pots, &c., will furnish sufficient employment for one man. The extent also may be judged by the number in the family; thus a rood of ground will be plenty for a family of four persons (exclusive of servants), and so on in proportion. *Shelter and shade* are also necessary to be secured for the kitchen garden. It should be sheltered from the east, north, and west winds, by hills, rising grounds, high buildings, or plantations of trees at such a distance on the east and west sides, as not to prevent the sun penetrating; shady borders should be contrived to protect the small annual plants, and other tender members of vegetation. *The soil of the kitchen garden is obviously a matter of the greatest consequence.* The best soil is a sandy loam not less than two feet deep, and good earth, neither of a binding nature in summer, nor retentive of wet in winter; but of such a texture that it can be worked without difficulty, in any season of the year. If it can be accomplished, the garden should certainly be made on land, the bottom of which is not of a springy wet nature. If the land be of too strong a nature, it should be well mixed with sands, or scrapings of roads, where stones have been ground to pieces. Sea-coal ashes, and the refuse of ditches, will be found very proper to mix with a strong soil; and if the ground should be cold, a large quantity of coal ashes, sea sand, or decayed vegetables should be laid upon it, in order to meliorate and loosen the soil, and render it easy to work. Lime rubbish, or light sandy earth from fields or commons, will also be found of great service to stiff clayey ground. In order to improve a soil, the cultivator must be mainly guided by its nature, so as, if possible, to render it serviceable for general purposes. And, hence, the importance of hitting upon that just medium which suits the generality of esculents, in the formation or improvement of the soil of the kitchen garden. Such a soil should be sufficiently tenacious to adhere to the roots of plants, though not so much as to be binding, which would certainly retard the progress of the plants. Hence a loam of middle texture, rather inclining to sand, may be considered as the most suitable soil for the purpose

here in view, and that on a double account, namely, the greater part of the valuable kinds of kitchen vegetables delight in such a soil, and it is worked at less expense than a stiff one; and in severe draughts it is neither apt to crack or be parched, nor in hard frosts to throw out. A copious supply of water is essential to a good kitchen garden, and from whatever source it is furnished, it should be distributed either in reservoirs or open cisterns, or in pipes properly protected over the garden. Many kinds of crops are lost, or produced of very inferior quality for want of watering. Lettuces and cabbages are often hard and stringy, turnips and carrots do not swell, onions decay, cauliflowers die off, and, in general, in dry seasons, vegetation becomes stunted, or covered with insects. Copious waterings in the evenings during the dry seasons, will, on the other hand, produce fulness and succulency. *The form of the kitchen garden is of little consequence.* It may be square, oblong, semicircular, or irregular, according to taste, or local circumstances. In the greater number of instances, an oblong, as represented in the

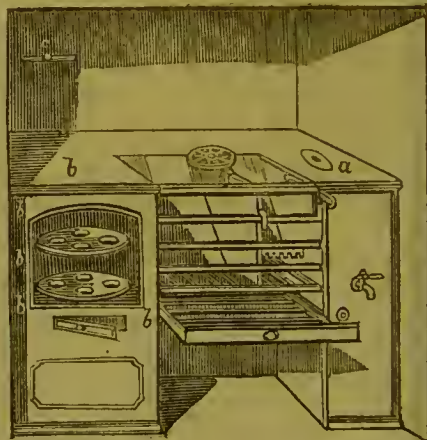


engraving, will be found most convenient. It is surrounded by a wall, in which is an entrance marked *e*. Within the wall is a border of several feet wide, and dotted round with flowers or flowering shrubs. Next is a gravel walk; and within is another border, containing fruit-bushes, or perhaps fruit-trees on espaliers; and in the centre is the body of the garden laid out in three plots marked *a*, *b*, and *c*. Between these plots and around them are paths (represented by dotted lines), of twelve or fourteen inches in width, not for ordinary walking, but for admission to the various plots or sections into which the ground may be divided. These paths are only flattened by the foot or by the spade, and are to be delved annually in the course of digging. At the opposite side of the garden from the door there may be supposed to be an arbour or summer-house, overhung with climbing plants, and fitted up according to taste. The regular walks in all moderately sized gardens should not be wider than three feet; any greater width is a mere loss of ground. Much care is required to keep walks in order, and especially to restrain the growth of grass and weeds. The following tools and gardening implements are those which are

most likely to be required in moderately sized gardens of a mixed kind—Spades of three sizes, a trowel for lifting flowers, Dutch and common hoes, a broad iron rake, a rake with short teeth for the walks, a small rake for flower borders, a strong clasp knife for pruning, a pair of strong pruning shears, an axe, a handsaw, a hammer and nails, a wheelbarrow, a wooden scuttle for carrying a little earth or manure, a roller, a pair of large compasses, a dibble and line, a watering-pot, and a ladder. Other utensils employed, as circumstances demand, need not be particularized; for a person possessing only a small garden will shortly discover by experience what are the articles required in his operations. Although certain latitude is allowed in laying out a garden, there are nevertheless determinate rules which should be followed. Thus, the wall is reserved for fruit-trees. As fruit-trees require much air and sun, the borders must not be clogged up with bushes, peas, or other tall vegetables. The borders should contain only small plants, which are dug up yearly, because the soil at the roots of the trees requires occasional renewing and loosening, and this operation cannot be performed if the ground is encumbered with permanent plants. If a row of gooseberry or other small fruit-bushes be placed on the borders, they should be near the outside, and not less than ten feet apart. Flowering plants should occupy the border most exposed to the sun, whilst those naturally loving the shade, should be placed in the south and west borders. The body of the garden within the walks, is laid out in larger or smaller plots according to taste. These plots are generally oblong, and are subdivided into sections, rows, or beds for the different kinds of kitchen vegetables. In some gardens, much of the ground is overshadowed by fruit-trees. This is seriously detrimental to the growth of plants beneath, exhausts the soil, and prevents the proper flowering and fructification of every vegetable within reach. When a garden possesses the addition of an outside strip, enclosed by a hedge, the exterior sides of the walls may be lined with fruit-trees, and the ground laid out for potatoes and other common classes of vegetables.—See CABBAGE, CARROT, LETTUCE, POTATO, &c., also DIGGING, HOING, WEEDING, &c.

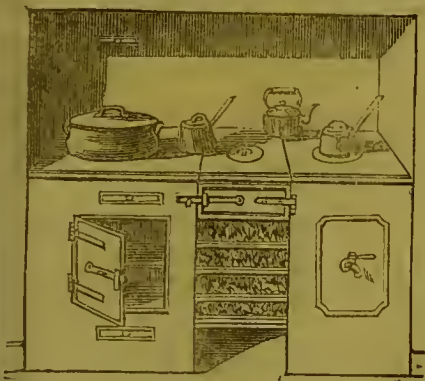
KITCHEN RANGE.—That portion of the culinary department which includes the fireplace, oven, boiler, &c. In the most improved kind, the grate contains a partition of iron, which is moved by concealed rack-work and a key, for the purpose of enlarging the fire when cooking is done, or contracting it when the cooking is finished. On the top of this partition is a revolving trivet, to hold a teakettle or saucepan over the fire. The top bar of the grate folds down, to reduce the height of the fire when necessary, and to support saucepans or boilers. A shelf or drawer below the fire may be drawn out to sustain the dripping-pan, plates, dishes, or anything where heat is required. On one side of the fire-bars is a series of hooks, on which one end of the

spit rests, the other end being carried by a chain coming up against an upright round, which is attached to a horizontal piece, that can be pulled out a little to bring the spits nearer, or remove them farther from the fire; and the hooks at the other end are also fixed to an upright bar that may be moved out in a similar manner. By this range, more than one spit may be in action one above another at the same time. Besides the range itself, there are frequently attached to it on one side, a boiler, fixed, and, forming part of the apparatus: this boiler extending along the back of the fire as well as at the sides, being heated by the fire in the grate, affords a constant supply of hot water, which is drawn off by a tap with a lever handle. On the other side of the range, there is an iron oven, heated by a small fire below it, and which, when well managed, serves to bake pastry, &c. It must be observed that to bake well in this oven, it must be so constructed that the heat from the fire may circulate over the top of the oven, and under the uppermost plate, as well as round the sides and back, in order that the heat may be thrown down upon the contents of the oven. When the oven is heated only on one or two sides, and not on the top, it does not perform nearly so well. Other range ovens are heated only by the fire in the range, without any below it, as shown in the engraving; there is a narrow aperture in the side of the grate, by



which the smoke and heat are allowed to pass beneath the bottom of the oven in the direction of *b b b*, thence round the side farthest from the fire, and over the top, and lastly, into the chimney flue, there being a damper *c*, to regulate the draught. Below the oven is an aperture by which to clean the flue occasionally. In other ranges, again, there is no circulation round the oven, which is heated only by the fire in the range on one side of the oven, assisted by a mass of iron that lies in the fire and communicates between it and the inside of the oven, thus affording a certain amount of

heat to the latter, by conducting it from the fire. Very small kitchen ranges sometimes have an oven and side boiler, both heated by the fire in the middle, without the boiler extending along the back of the fire; but such a range cannot have a partition to wind up so as to reduce the dimensions of the fire, as the latter must come up to both oven and boiler; these cannot be expected to act so well, but they are sufficiently useful, and much cheaper. In very large kitchens where a great deal of cooking is performed, the range is usually made of a much more ample size, and is constructed of wrought iron instead of cast iron, being of greater strength and durability. In the construction of some kitchen ranges, it is endeavoured to dispense with the ordinary open fire, and to depend upon hot plates, baking ovens, steam, &c. These arrangements are economical in point of fuel, and well adapted to particular cases, but the general use is questionable, as so much depends upon the intelligence of the servant under whose care the apparatus is placed. A kitchen fire-place constructed upon the principle of having a hot plate immediately over the fire, is illustrated in the annexed figure. Here



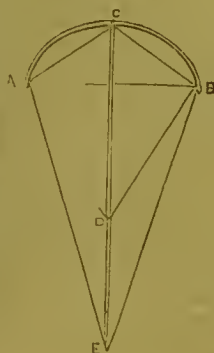
the fire in the range, instead of being open at the top in the usual way, is covered by a plate of cast iron, and the smoke is made to pass into a flue behind the back of the chimney. By this mode, the soot is prevented from falling upon the various vessels placed on the hot plate; and when the inside of the chimney is lined with white glazed tiles, it has a very neat and clean appearance. Immediately below the hot plate, and above the bars of the grate, there is a narrow door for throwing coals on the fire, and just over the fire there is a circular aperture, generally covered with an iron plate; but when the cover is left off, the aperture serves to cause anything to boil quickly when placed over it. On the right of the range is a boiler, and on the left an oven. Latterly several kitchen ranges have been introduced, so constructed that the whole is connected together, requiring merely to be set in the chimney with very little trouble by the bricklayer. On account of repairs, however, it is better to have the

several parts of kitchen apparatus as independent of each other as possible. Many kitchen ranges are put out of order or neglected through the ignorance of the person in whose charge they are placed; when, therefore, a new servant arrives, it would be as well to explain to her the working of the kitchen apparatus if it possesses any peculiar features; a few words thus timely spoken will obviate much trouble and expense hereafter.—See **BOILER, FIRE, OVEN, STOVE, &c.**

KITCHENER'S ZEST.—A well known sauce used for fish, meat, &c., and made as follows:—A pint of claret, a pint of mushroom ketchup, and half a pint of walnut pickle; four ounces of pounded anchovy, an ounce of fresh lemon-peel thinly pared, and the same quantity of shalot audseraped horseradish, an ounce of black pepper and allspice, a drachm of cayenne, and a drachm of celery seed. Infuse these in a wide-mouthed bottle closely stopped, for a fortnight, and shake the mixture every day; then strain and bottle it for use. A large spoonful of this stirred into a quarter of a pint of thickened melted butter, makes an admirable fish sauce. Or the same quantity of the zest may be mixed with the gravy of cutlets, &c., and will prove extremely savoury.

KITE.—In order to make this implement of healthy sport, proceed as follows:—Procure a lath of deal of the length of your proposed kite, and a thin hoop or piece of hazel for the arched piece; a piece of whalebone or split cane will, perhaps, do better. Fasten the arched piece at its centre to the upright lath, and bend it to the form you wish, connecting the ends by means of a piece of string, which should twist round the lath. Connect all the points A, B, C, D, E, by passing the string through each, as in *fig. 1*. Make them fast, and the skeleton of the kite will be complete. You must next paste together as many sheets of thin paper as will cover the kite, leaving a margin to be pasted over the outer edges. Bore two holes in the upright, one about a fifth of the kite's length from the top, and the other about a fourth from the bottom; run through these and fasten by a knot at the ends your

Fig. 1.



belly-band string, to which the ball of string by which you fly your kite is afterwards fixed. At the point in the belly-band where the kite exactly balances, fasten your string. The wings of the kite are made by cutting half through several sheets of white paper, which are afterwards rolled up and fastened at A and B (*fig. 1*). The tail, which should be from ten

to twelve times the length of the kite, is made by tying pieces of writing paper folded about an inch broad, and three inches long, at intervals of three inches and a quarter on a string, with a longer bob, similar to the wings, at the bottom of it. The kite may now be flown. *Cloth kites* made of linen or calico are greatly to be preferred to those made of paper, both for durability and portability. The paper kite is liable to get torn in being carried to or from the field, whereas, the cloth kite being folded up in carrying, is no more trouble than a walking-stick would be. The cloth kite is made in the following manner:—Two pieces of planed wood are placed across each

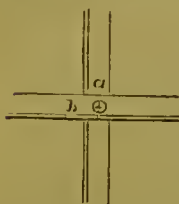


Fig. 2.

other, as shown in *fig. 2*, and held together by means of a piece of wire bent into a loop at *a*. Within this loop a thin wooden collet or button is placed, in order that the two transverse pieces may work freely on their centres. Thus, when not in use, the two transverse

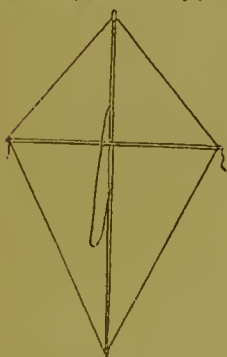


Fig. 3.

pieces may be laid longitudinally, one upon the other. The form of the cloth kite differs from the paper kite in being of an oblong diamond, as seen in *fig. 3*. The calico being cut to the requisite shape and size, has to be hemmed round the edges, to prevent their fraying. Its two narrow ends are tied to the top and bottom ends of the longest stick; and the loop of the centre wire is to be passed through the calico. A piece of tape is then attached to those corners of the calico which are to be fastened to the extremities of the cross piece of wood, and another piece of tape is fixed to the wood itself. When these are tied, and the calico drawn tight, the kite is fit for use. Not more than two minutes are required to put the whole apparatus in working order, and less time than that, even, will suffice to undo it and make it portable again.

KNEE, AFFECTIONS OF.—This joint is, fortunately, so securely guarded and bound together by external and internal ligaments, as to be very rarely dislocated; and most fortunate for man it is so, as from those reasons, and other causes, its reduction is a matter of extreme difficulty. The knee-cap, however, is very liable to injury, and sometimes fracture; though in general this joint suffers most from blows and falls, in which case considerable inflammation takes place,

attended with great heat, pain, and swelling. Such a state of the joint should be immediately treated by applying six or twelve leeches, encouraging the bleeding by hot fomentations of water, and after by hot sugar of lead lotions, and the limb kept as quiet as possible. After three or four days of such treatment, friction may be applied, by rubbing in some lard with the hand, so as gently to restore tone and strength to the part.

The knee-joint is particularly liable to a species of chronic enlargement, sometimes perfectly harmless, and which consists only of a thickening of the ligaments and capsule of the joint, and for which rest, and the following ointment, rubbed well in twice a day, will generally be found a perfect cure:—Take of

Camphor	1 drachm.
Iodine	1 scruple.
Spermacei ointment	1 oz.

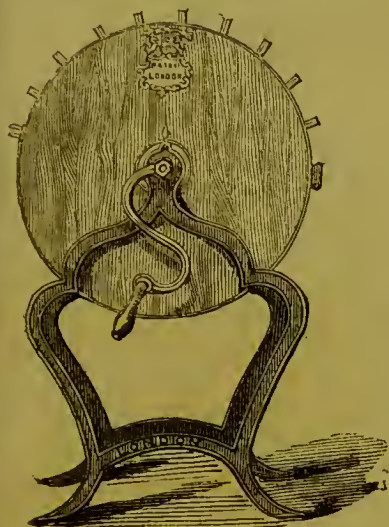
Mix. Sometimes, however, when the constitution is diseased, these swellings become malignant, and yield to no remedy short of surgery; of this kind is the disease of the knee known as white swelling. But for all ordinary affections of this part, either hot fomentations, cold lotions, leeches, and the above ointment, will be found sufficient.

KNIFE-BOARD.—The construction of a board on which to clean knives is very simple. Cover a deal board about four feet long, one foot wide, and an inch in depth, with thick buff leather, on which put emery one part, erocus martis three parts, in very fine powder, mixed into a thick paste with a little lard or sweet oil, and spread on the leather to the thickness of a shilling; this kind of board gives a far superior edge and polish to knives, and will not wear the blades nearly so much as the common method of using brick-dust on a board. When, however, the ordinary brick-dust boards are used, they should be provided with a stiff brush for cleaning the forks, at one end; and at the other end should be a box with the open end towards the hand, and a sliding lid; this should contain a bath-brick, leathers for forks, &c. A hole should also be bored at one end, and a string inserted, by which the board may be hung up out of the way when not in use.

KNIFE CLEANING.—In cleaning knives by the aid of the ordinary board, the knives should be previously washed and wiped thoroughly dry, the bath-brick is then to be rubbed briskly over the board several times until a sufficient quantity of the dust is produced. The knife is then brought to bear upon the board with the edge of the blade towards the cleaner; it is then passed backwards and forwards with a quick motion, and when that side is done, the blade is reversed and the other side cleaned; as they are finished they should be placed in the box, and when the whole operation is completed, they should be wiped separately and carefully, so as to remove any dust adhering to them. During the last few years an implement known as a knife cleaner has been introduced, by which a great deal of

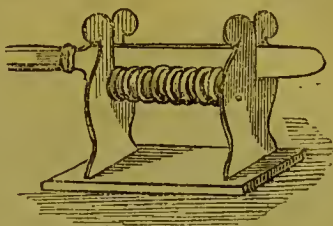
the labour and time employed by the old method is saved. This implement consists of a series of brushes arranged within a revolving case, and when the knives are to be cleaned they are inserted within this case at certain distances, the machine is then set

sharpening the carving knife by a steel is at all times inelegant, and requires great dexterity to produce the desired effect. An excellent kind of knife sharpener is that shown in the engraving, which consists of two steel cylinders, placed parallel to each other, and revolving upon their axes. Each cylinder has protecting rings of hard steel,



in motion, and in a few seconds the knives may be taken out perfectly cleaned. The only objection to this ingenious contrivance is, that it destroys the blade in a shorter time than in the ordinary method; the amount of friction brought to bear upon it to produce the polish, wearing down the metal. Where, however, this is not regarded as of importance, and the saving of time and labour is the first consideration, and a perfectly clean knife the second, nothing can be better than the knife cleaner as thus described; and, indeed, to large establishments, such as hotels, commercial houses, schools, &c., where the number of knives used is very considerable, this modern introduction must prove invaluable. A powder is sold with this implement, to be used according to the directions given. The prices of the knife cleaners vary with their size and capacity, for a small family one may be obtained for about four guineas, the prices gradually increasing to fifteen pounds.

KNIFE SHARPENER.—Few things prove a greater drawback to the enjoyment of a dinner than a blunt knife; whilst, to a carver who has to perform his operations under such circumstances, the result is embarrassing and vexatious in the extreme. Some carvers, very unreasonably, never trouble themselves about the state of the knife with which they are to operate, until the dinner is served; and then, when the guests are expecting to be helped, several precious moments are wasted in putting an edge on the knife, which ought clearly to have been done previously. The mode of



the edges of which are grooved finely. The edges of the rings in the opposite cylinder overlap each other, as at *b*, by the rings of one cylinder falling between those of the other. If the edge of the knife be drawn from hilt to point between the cylinders, at their junction, a good edge will be given to it by the action of the sharp grooves on the rings, which act like a file.

KNIVES, CARE OF.—Knives may be preserved for a long time with a little care. When not in common use, the blades should either be rubbed over with mutton suet, or the knives kept in a wooden box containing sifted quicklime, care being taken that the blades only touch the lime. When knives are placed in hot water, the blades only should be immersed, and for this purpose, a jug or pot of the same depth as the blades of the knives should be employed. If the handles become loose, make a cement of brick-dust and melted rosin mixed together, and apply it to the defective handle. Handles of ebony should be cleaned with a soft cloth dipped in a little sweet oil; and after resting awhile with the oil on them, let them be well wiped with a clean towel. Ivory or bone handles ought to be washed with a soaped flannel and lukewarm water, and then wiped with a dry towel. To preserve or restore their whiteness, soak them occasionally in alum-water that has been hoiled, and then suffered to grow cold. Let them lie for an hour in this mixture, then take them out, and brush them well with a small brush, and afterwards take a clean linen towel, dip it in cold water, squeeze it out; and while wet, wrap it round the handles, leaving them in it to dry gradually.

KNITTING.—Books: *Cooper's Knitting and Crochet*, 1s.; *De la Brachandiere*, 2s. 6d.; *Cassell's Ladies' Book*, 2s. 6d.; *Gauguin's Novelties*, 2s. 6d.; *Mee's Manual*, 5s. 6d.; *Flohr's German*, 7s. 6d.; *Savage's Knitting, Needlework, and Crochet*, 1s. 6d.; *Gauguin's Knitting, Netting, and Crochet*, 16s.; *Watt's Selections*, 1s.; *Ronaldson's Knitting Book*, 2s.; *Babies' Wardrobe*, 6d.; *Miland's Ladies' Book*, 4s. 6d.; *Clarke's Handbook*, 1s.; *Cassell's Work Book*, 2s. 6d.; *Lambert's Knitting Book*, 1s. 6d.; *Copley's Comprehensive*, 7s. 6d.; *Mee's Exercises*, 1s. 6d.; *Floral Book*, 1s.; *Owen's*

Handbook, 1s.; *Lambert's Ladies' Pocket Book*, 1s.; *De Berre's Knitting Made Easy*, 1s.; *Flohr's Treatise*, 7s. 6d.; *Sherwood's Designs*, 6d. each; *Brachandiere's Child's Knitting*, 6d.; *Hope's Knitter's Casket of Receipts*, 1s.; *Hope's Knitter's Friend*, 1s.; *Gaugain's Knitter's Friend*, 2s. 6d.; *Ladies' Cabinet Knitted Designs*, 6d. each.

L.

LABEL.—In the practice of horticulture, labels are necessary for indicating the names and positions of various plants. Many forms and substances are adopted for labels. For general use they should embrace among their good qualities cheapness, durability, facility of being written upon, and legibility. The most unpretentious kind of label, and one answering every necessary purpose, may be made of a small piece of deal, planed smooth, painted white, and written on with a blacklead pencil, as in *fig. 1*. If the label be fastened to the plant by a shred

Fig. 2.



of thin lead, it retains any desired position. When required for a seed-bed, a small stake is to be driven into the ground, and from it the label is to be suspended. The stamped numbering instrument is formed in various ways; the simplest and most economical are triangular slips of lead: for plants in pots they need not be longer than three inches, or broader at the head than half an inch. On these the number is stamped with a type, or the name at length may be stamped in the same manner. Such labels are durable, unobtrusive, and not so readily driven out of pots as those of wood. Leaden tallies are chiefly used for small plants in pots, and every gardener may cast them for himself. The advantage of leaden tallies over iron ones is, that they retain the names painted on them for a much longer time; and their superiority to wooden ones consists in their being much more durable. Named tallies consist of a cast-metal standard, with a long square head, in the front of which is a hollow box, into which a ticket, with the name written on it, is put; a piece of glass, cut to the proper size, is then fitted in over the name, and fastened with putty, like the pane of a window. The ticket on which the name is written may be of wood, tin, or earthenware; but wood is preferable, because it can be easily written upon by a carpenter's blacklead

pencil, and also because it is not liable to rust. An imitation of this label, on a small scale, for pots (*fig. 2*), has been made of terro-metallic earth. The mode of naming or registering by series, is done by marking down the names in a book or on the plant, without the use of labels at all. Thus, suppose the east side of an east wall is to be planted with fruit trees begin at the south corner, and write

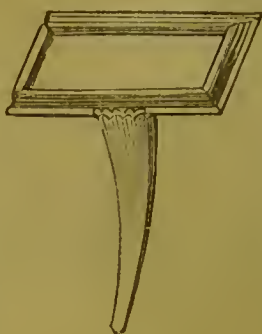


Fig. 2.

down under that title the sort of trees in the order in which they are planted, placing in the list a number against each name, in regular series. Suppose that you afterwards want to find which tree is the golden pippin, then looking in the list, that name is found opposite No. 9; counting nine, therefore, from the south corner, will give the tree as indicated.

LABELS, FOR BOTTLES, &c.—Labels which are insoluble, and capable of resisting the action of oils, spirits, water syrups, and dilute acids, may be obtained as follows: Lay a coat of strained white of egg over the label (an ordinary paper one), and immediately put the vessel into the upper portion of a common steam-pan, or otherwise expose it to a gentle heat, till the albumen coagulates, and turns opaque; then take it out, and dry it before the fire or in an oven, at a heat of about 212 degrees; the opaque white film will then become hard and transparent. The labels or bottles containing strong acids or alkaline solutions, should be either etched upon the glass by means of hydrofluoric acid, or be written with incorrodible ink.

LABURNUM.—This family of ornamental shrubs belongs to the pea tribe, to which they are allied by the similarity of their organs of fructification. They may be considered rather as shrubs than as trees, and are very ornamental from the handsome form of their leaves, and the beauty of their dependant gay-coloured flowers. The tree laburnum produces a timber, much prized by cabinet makers and turners for its hard, compact, durable structure. Hares and rabbits are so fond of the bark of this species, that it is frequently planted on the outskirts of other plantations, in order to protect the more valuable trees. Though eaten to the ground in winter, it will spring again next season, and thus afford a constant supply for these animals, so as to save the other trees till of a size to resist their attacks. The seeds or peas of the laburnum possess narcotic properties, and have sometimes proved poisonous to chil-

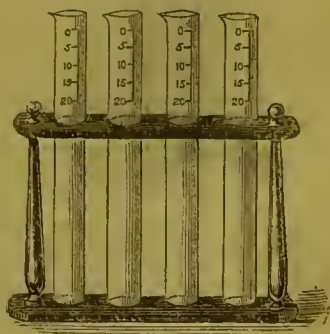
dren when eating them. They excite nausea, vomiting, great heat of the stomach, fever, a dry mouth, and after a time a fatal collapse. Although they excite vomiting, yet the stomach should be cleared of the seeds by an emetic, and acidulated liquids afterwards administered.

LACE, TO CLEAN.—*For point lace.* Fix the lace in a prepared tent, draw it straight, make a warm lather of Castile soap, and, with a fine brush dipped in, rub over the point gently; and when it is clean on one side, do the same to the other; then throw some clean water on it, in which a little alum has been dissolved, to take off the suds; and having some thin starch, go over with the same on the wrong side, and iron it on the same side when dry; then open it with a bodkin, and set it in order. To clean point lace, if not very dirty, without washing: fix it in a tent as the former, and go over with fine bread, the crust being pared off; and when it is done, dust out the crumbs, &c. *For white silk lace or blonde.* Take a black bottle covered with clean linen or muslin, and wind the blonde round it, securing the ends with a needle and thread, not leaving the edge outward, but covering it as you proceed. Set the bottle upright in a strong cold lather of white soap and very clear soft water, and place it in the sun, having gently with your hand rubbed the suds up and down on the lace. Keep it in the sun every day for a week, changing the lather daily, and always rubbing it slightly when the suds are renewed. At the end of the week take the blonde off the bottle, and pin it backward and forward on a large pillow, covered with a clean tight ease. Every scollop must have a separate pin; or more, if the scollops are not very small. The plain edge must be pinned down also, so as to make it straight and even. The pins should be of the smallest size. When quite dry, take it off, but do not starch, iron, or mess it. Lay it in long loose folds, and put it away in a pasteboard box. *To wash thread lace.* Rip off the lace, carefully pick out the loose bits of thread, and roll the lace very smoothly and securely round a clean black bottle, previously covered with old white linen, sewed tightly on. Tack each end of the lace with a needle and thread, to keep it smooth; and be careful in wrapping not to crumple or fold in any of the scollops or pearlings. After the lace is on the bottle, take some of the best sweet oil, and with a clean sponge wet the lace thoroughly to its inmost folds. Have ready in a wash-kettle a strong cold lather of clean water and white Castile soap. Fill the bottle with cold water, to prevent its bursting, cork it well, and stand it upright in the suds, with a string round the neck, secured to the ears or handle of the kettle, to prevent its rolling about or breaking while over the fire. Let it boil in the suds for an hour or more, till the lace is clean and white all through. Drain off the suds, and dry it on the bottle in the sun; when dry, remove the lace from the bottle, and roll it round a wide ribbon block; or lay it in long folds, place it within

a sheet of smooth white paper, and press it in a large book for a few days.

LACQUERING.—The name given to a thin varnish applied to brass work, such as handles of locks, door plates, &c., to prevent their tarnishing. Brass work may be relacquered in the following manner. The metal should be just warmed, and a lacquer laid over it evenly with a soft brush, as follows:—Put an ounce of turmeric, two drachms of annatto, and two drachms of saffron into a pint of alcohol: agitate it occasionally during a week, and then filter it into a clear bottle. Add to this three ounces of clean seed-lac, and shake up the bottle now and then during a fortnight. For a lacquer to give tin, or articles covered with silver leaf, the appearance of brass. Melt, in several vessels, two ounces of gum-lac, and eight ounces of amber; mix them well together, and add half a pound of drying linseed oil. Digest in a pint phial a little saffron in half a pint of oil of turpentine; strain this liquor, and add to it some gum tragacanth, and annatto, finely powdered. Mix this last compound with the former, and shake them well. It is by this varnish that leather is made to appear as if gilded, after it has been covered with silver leaf. *To clean lacquered articles:* brush them with soap and warm water, wipe them, and set them before the fire to dry; finish with a soft cloth. By this simple means may be cleaned ormolu and French gilt candelabra, branches, and lamps; mosaic gold and gilt jewellery, toys, and ornaments. Care is requisite in brushing the dirt from fine work, and finishing it quite dry. Anything stronger than soap, as acids, pearlash, or soda, will be liable to remove the lacquer.

LACTOMETER.—An instrument used in dairies for measuring cream. Three or four glass tubes, about a foot high, divided into 100 parts, and graduated near the upper



ends, are loosely supported in a wooden stand, and filled with the milk warm from the cow, one being devoted to each sample to be examined. The scale is generally extended down one-fifth of the tube, and this will nearly always suffice; but in some cases,

the amount of cream is much greater than this. After standing twelve hours, the cream has all risen to the surface, and the figure opposite its lower edge marks the percentage of cream to milk. Thus, supposing it stands at the figure 10, then there is ten per cent. of cream; or if at 5, then only five per cent., and so on. The average of cream appears to be about eight or nine per cent., but in different breeds and pastures, it will vary greatly from that amount. Provided with the hydrometer to measure the amount of curd, and with the lactometer the proportion of cream, the dairyman will be able to ascertain whether the cows he has are worth keeping, or whether he ought to make an attempt at bettering himself by getting rid of them and purchasing others.

LADDER.—A well-known construction by which persons are enabled to ascend to certain heights from the ground. A ladder should always be kept upon the premises, as it will be found convenient in many emergencies, and frequently in cases of fire, will be the means of preserving life. In order that the ladder may be placed out of the way, and yet always ready at hand, it should be suspended upon two or more strong iron hooks driven into the garden wall, or the boarding of an outhouse. Ladders are most useful implements about a farm-stead. They are best formed of tapering Norway pine spars, sawn up the middle. A useful form of ladder for farm purposes is shown in the accompanying figure, where the rounded form of the Norway spar is placed outermost,



though it is as often placed innermost. These spars are connected together by steps of clean ash, pushed through auger-made holes in the spars, and rendered firm by means of wedges driven into the outside ends of the steps. The steps are nine inches apart, sixteen inches long at the bottom, and thirteen inches long at the top, in a ladder of fifteen feet in length, which is the most appropriate size for the use of a stack-yard. To prevent the ladder from falling to pieces, in consequence of the shrinking of the round steps, a small rod of iron is placed under the upper, middle, and lower steps, where one of

its ends is passed through each spar, and held firmly there by means of a shoulder on the inside, and a nut and screw on the outside of each end of the rods. When properly finished and painted, such a ladder will last for many years. Some dexterity is required to set a long ladder on end, as also to carry it from one place to another. To place it in a perpendicular position, its lower or heavy end should be pushed against any object capable of resisting its slipping on the ground; and on its light end being elevated arm's length above the head, the position is kept good by another person taking a step between the prongs of a fork, by means of which, that end of the ladder is still more elevated, while it is still increased by the first person pushing arm's length, simultaneously, against one step after another, till the perpendicular position is gained. A long ladder is carried from one place to another in this way, provided the distance be short. Set the perpendicular edge of the ladder against the right shoulder, and then take hold of a step with the right hand, and raise the ladder steadily by it a little from the ground, while to retain the perpendicular position, grasp a step above the head firmly with the left hand, and then walk steadily forward. A ladder may be moved along the ground for a short distance while standing in a perpendicular position, by holding a spar in each hand at arms' length, and then moving first one foot of the ladder in advance and then the other, till the spot is gained. A long ladder is brought down from the perpendicular to the horizontal position, by placing it against a stack or any other object which will resist its foot slipping on the ground, and allowing it to come to the inclined position against the arms, with the hands stretched above the head; the ladder will then approach the horizontal position the farther the person recedes from its lower end, the upper end being supported by another person with a long fork.

LADY.—The title of lady, like that of gentleman, admits of wide application, and may be claimed by any female, whose manners and address distinguish her above the ordinary class. There is a great charm about a ladylike person, which materially adds to beauty, and goes far to compensate for this latter quality where it is wanting. To arrive at this position, a female must avoid everything in the shape of vulgarity and bad taste, whether in connection with her actions, her speech, or her attire, the latter especially must be regulated by good taste; eschewing all sorts of display, gaudiness, and inappropriateness. In a word, a female who wishes to be regarded as a lady must take good sense and propriety as her guide, and not suffer herself to be led away by any meretricious attractions, or determined by an unworthy standard.

LADY'S MAID.—The duties of the lady's maid, if not arduous, are unremitting, between the attendance on the toilet and the charge of the wardrobe of her lady. Her daily occupations commence with arranging the dressing-table, after the dressing-room has been dusted and swept by the house-

maid. After setting out and preparing everything which may be required, she awakens her lady at the proper hour, and then retires till summoned by the bell to attend her, to brush, comb, and dress her hair, and to assist in the completion of the morning toilet. After replacing or putting away everything which has been used, she next directs her attention to the state of the wardrobe; occupying herself in making new, or repairing any old articles of apparel, until her lady again requires her attendance, either in preparing for riding, walking, or dressing for dinner. At night, also, she arranges everything for the retiring of her lady, as she did in the morning for her rising. By this routine of duties it will be seen that a lady's maid should possess distinct qualifications from any other member of the establishment. Her taste in dress should be cultivated, or she will be unable to judge in the dressing-room of the effect which the *tout ensemble* of the lady's costume will have in the drawing-room. She should acquire a knowledge of the most agreeable combination of colours, and of the effects which these produce upon different complexions. If she have also a ready perception of the proper *set* of each part of a lady's attire, and have the art of giving this effect or air, to the dress of her employer, she may be regarded as a skilful tirewoman. It is this art which gives more style and elegance to dress than the costliness of the materials, and supplies the finishing stroke to that which would otherwise be unfinished. The art of applying cosmetics should also be understood by the lady's maid, and it should be especially ascertained how far these agents are innocent or injurious. The charge of the wardrobe requires that in dress-making and millinery she should be a proficient. As a sempstress, expertness in making and repairing linen and other articles will be expected from her; and she should consider that the contents of the wardrobe being under her care, she ought to be capable of using her needle in whatever way the different articles in it may require. Clear-starching, getting up laces and nets, washing gauzes, crape, and silk-stockings, removing fruit-stains or soils from silks, preserving furs, woollens and other worsted clothing from moths, are all included in the duties of a lady's maid. Nor must she neglect to note the quantity of linen sent to and returned from the laundry, nor to make occasional comparison of the contents of the wardrobe with the inventory given to her on entering the service of her employer. Should she be the attendant of an elderly or infirm lady, it may be requisite for her to read aloud agreeably, and to write neatly—acquirements which may be easily gained with diligence and attention.

LAMB.—As a food, lamb is milder, more delicate, and less exciting than mutton; the flesh is white, tender, and gelatinous. Lambs are sometimes fatted on grass for the butcher, and sometimes reared by suckling, or by hand, on milk. Those which are suckled by the mothers and fattened in houses, and hence called *house lambs*, are the

earliest in the spring season, beginning to be ready in December and continuing till February. If lambs are allowed to suckle by their mothers for six months or a little more, the flesh becomes more nourishing and digestible than if they are weaned at two months, as they frequently are. The best lambs for the table are those which have been nourished from the milk of the mother alone; but the fattest are those which have sucked from several ewes at the same time. The grass-fed lamb comes next in season, in April and May, and continues till Christmas. Of all the kinds of lamb those known as the Southdown are the best, and they may be known by their black legs and faces, which are generally left on to mark their superiority. The freshness or staleness of lamb are the chief points to be attended to in purchasing it. In choosing the fore quarter, the vein in the neck should be ruddy, or of a bluish colour. In the hind quarter, the knuckle should feel stiff, the kidney should be small and perfectly fresh. Perhaps the best judgment of all may be formed from the eyes; as long as they are full and bright, the buyer may rest assured that the lamb has been recently killed. In order to keep lamb sweet, the joints should be carefully wiped every day, and, in warm weather, sprinkled with a little pepper.

LAMB BAKED.—Half roast either a neck or loin of lamb, then cut it into steaks; boil half a pound of rice in water, for ten minutes, and put to it a quart of good gravy, with some nutmeg and two or three blades of mace; stew it over a slow fire until the rice begins to thicken; then take it off, stir into it a pound of butter, and when quite melted, add the yolks of six eggs, well beaten; butter a dish all over, put a little pepper and salt to the steaks, dip them in the melted butter, and lay them in the buttered dish; pour upon them the gravy which comes from them, and then the rice; pour over the yolks of three eggs well beaten, bake it in an oven for rather more than half an hour.

LAMB BLANQUETTE.—Roast a leg of lamb, and when cold remove all the skin and nerves, and cut the flesh into pieces of about the same size and thickness, cut off the angles so as to make the pieces nearly round, beat them with the handle of a knife, and put them into a saucepan with some fried mushrooms, a quart of good stock, and a little pepper; set the saucepan over the fire for a few minutes, thicken the contents with the yolks of two eggs; make it quite hot, and serve with sippets.

LAMB, BREAST OF, STEWED.—Cut the flesh into pieces, season with pepper and salt, and stew it till tender, in sufficient gravy to cover the meat, then thicken the sauce and pour in a glass of sherry; serve on a dish of stewed mushrooms.

LAMB CHOPS.—Having cut a neck or a loin of lamb into chops, rub them over with the yolk of an egg, well beaten; then grate some bread, finely, and mixed with some chopped parsley; a little lemon-peel, pepper, salt, and a very small quantity of nutmeg, sprinkle this over the chops; after which

fry them of a good colour, and serve with a sauce made of the trimmings of the chops, a piece of butter floured, and a little mushroom ketchup. They may be served with gravy, if preferred. To dress lamb chops with potatoes, cut the back ribs of a large lamb into handsome chops, trimming off the bone with a chopping knife. Season and brush the chops with a well-beaten egg; dip them in crumbs and minced parsley, and fry them delicately. Place mashed potatoes high in the centre of a dish, score them neatly, and lay the hot chops around, leaning each chop towards the side of the adjoining one. A finely-minced onion may be added to the mashed potatoes, if its flavour be approved. The ordinary method of dressing lamb chops, is simply to cut chops from the loin of about half an inch in thickness, retaining the kidney in its place; dip them into egg and bread crumbs, fry and serve with fried parsley.

LAMB COLLOPS.—Cut the collops very thin; beat, marinate, and fry them; dredge them with flour and spice, and sprinkle them with sweet herbs; put them into a stewpan, with two or three spoonfuls of water or stock, boiled up in the frying-pan; pour it over the collops, add some thin quartered slices of lemon, or a handful of finely-minced parsley; simmer, dish, and garnish with lemon.

LAMB CUTLETS.—These may be prepared in a variety of ways, as follows: 1. Set the cutlets in butter, in a stewpan over the fire, taking care that they do not burn; take them out, let the butter cool; mix it with the yolks of two eggs beaten well; moisten the cutlets with a little gravy, strew bread crumbs over them, and stew them over a slow fire. Serve with gravy, and the juice of a lemon. 2. Take the cutlets from the best end of the neck, cut them thin with one bone to each; trim off the fat and all the skin, scrape the bones very clean that they may appear white, and season the cutlets with salt and pepper; brush them with egg, dip them into very fine bread crumbs, then into clarified butter, and again into the bread crumbs; broil them over a very clear and brisk fire, till they attain a delicate brown colour; press them between two sheets of white blotting-paper to extract the grease; dish them in a circle, and pour into the centre cucumber sauce. 3. Take thin cutlets from a leg of lamb, and put them into a stewpan; make a sufficient quantity of good stock with the bones, shank, &c., to cover the cutlets, put it into the stewpan and add a bunch of sweet herbs, an onion, and some clove and mace enclosed in a muslin bag, let them stew gently for ten minutes. Take out the cutlets, skim off the fat, and also take out the herbs and spice; thicken the stock with butter rolled in flour, season it with salt and a little cayenne pepper; add a few mushrooms and truffles; make some forcemeat balls and add them, also the yolks of three eggs beaten up in half a pint of cream, and some grated nutmeg; keep stirring the same way until it is thick and smooth, and then put in the cutlets; give them a toss up, take them out with a fork,

and lay them on a dish; pour the sauce over them, and garnish with beet-root and lemon.

LAMB, FORE QUARTER OF, ROASTED.—This is considered the prime part of lamb. It should be roasted before a clear brisk fire, and basted with butter carefully and plentifully from the moment of its becoming warm, until it is thoroughly done; although, however, it requires quick roasting, it should never be placed sufficiently near the fire to endanger the fat, which is very liable to catch or burn.

LAMB HASHED.—Rub a piece of butter into some flour, with the point of a knife, until it is well mixed; then put it into a stewpan with some mushrooms cut in pieces, and a bunch of herbs; moisten with stock, and let it stew gently till the sauce is nearly consumed; cut up some cold roast lamb into slices, and put them into a stewpan with the yolks of four eggs beat up with some milk; let it thicken over the fire, but do not allow it to boil; dish and serve with the juice of a lemon over it.

LAMB, HIND QUARTER OF, ROASTED.—This may be roasted in the same manner as the fore quarter, or as follows: lard it, and cover it with oiled paper; when rather more than half-done, withdraw the paper, baste the joint with yolk of egg, and slightly strew it with bread crumbs; then put it nearer to the fire to give it a fine brown; when served, sprinkle it with lemon-juice.

LAMB, LEG OF, BOILED.—Put the joint into a saucepan containing sufficient clear soft water to cover it; let it remain for half an hour; then add a tablespoonful of vinegar, and half a handful of salt; put the leg of lamb into a thin white cloth which has been floured, and boil it; a bundle of sweet herbs may also be thrown into the saucepan; if served hot garnish with parsley, and thin slices of lemon laid around the dish; if not sent to table until it becomes cold, tastefully arrange sprigs of parsley around it.

LAMB, LEG OF, FORCED.—Carefully take out all the meat with a sharp knife, and leave the skin whole with the fat on it; convert the leau which has been cut into a forcemeat, thus: to two pounds of meat add two pounds of beef suet chopped small, and beat it in a marble mortar till it is very fine; take away all the skin off the meat and suet, and mix it with four spoonfuls of grated bread, eight or ten cloves, four or five blades of mace dried and beaten fine, half a nutmeg grated, a little pepper and salt, some lemon-peel cut fine, a small portion of thyme and parsley, and four eggs; mix all together and put it into the skin so that it may assume its original form; sew it up, roast it, and baste it with butter, and serve with stock cut from the loin and fried in gravy.

LAMB, LEG OF, ROASTED.—This joint should be roasted gradually, commencing at a distance from the fire, and gradually placing it nearer; it should be well basted, dishd hot, and served with mint sauce.

LAMB, LEG OF, STEWED.—Choose a small plump leg of lamb not greatly exceeding five pounds in weight; put it into a

vessel nearly of its size, with a few trimmings or a bone or two of undressed veal; cover it with warm water, let it boil slowly, clear off the scum with great care, and when all is skimmed off, add a bunch of thyme and parsley, and two carrots of moderate size. Let the lamb simmer only, but without ceasing for an hour and a quarter; serve it covered with bechamel, or rich English white sauce, and send a boiled tongue to table with it, and a portion of the same in a tureen. The same joint is also a very nice dish when stewed with peas as follows:—

Stew a leg of lamb in some stock or beef braise. When sufficiently done, take it out, put it into a slow oven and glaze it three or four times; then have some young green peas well stewed, with some bechamel sauce. Pour them on the dish, lay the leg on the top, cut the loin into cutlets and fry them in butter and rich gravy; when nearly done, shake them well in their glaze, dish round the lamb over the peas, and serve them hot.

LAMB, LOIN OF, STEWED.—Wash the joint, and wipe it very dry; skewer down the flap, and place it into a close-shutting and thick stewpan or sauepan, in which three ounces of butter have been just dissolved, but not allowed to boil; let it simmer slowly over a very gentle fire for two hours and a quarter, and turn it when it is rather more than half-done. Lift it out, skim and pour the gravy over it; send asparagus and brown gravy to table with it.

LAMB PIE.—This pie should be made of the loin, neck, or breast. It should be very lightly seasoned with pepper and salt, and the bones should be taken out, but not the gristle; a small quantity of jelly gravy may also be put in hot, but the pie should not be cut till cold; put in two spoonfuls of cold water, cover with a rich puff paste, and bake of a light brown.

LAMB RAGOUT.—Free the flesh of any part of lamb from the bones, and cut it into pieces; lard it with bacon fried of a light brown, stewed in mutton gravy sufficient to cover it, and seasoned with sweet herbs, pepper, salt, and spice; half an hour's stewing will be sufficient. Strain off the gravy (keeping the lamb hot), and add to it some oyster fried brown, half a glass of port wine, a few mushrooms, and a piece of butter rolled in flour; boil these together for a few minutes with the juice of half a lemon. Lay the lamb in a dish, and pour the sauce over it.

LAMB, SADDLE OF, ROASTED.—This is an exceedingly nice joint for a limited party. It should be roasted at a brisk fire, and kept constantly basted with its own dripping; serve it with mint sauce, cucumber sauce, and a salad.

LAMB, SHOULDER OF, BRAISED.—Bone a small fat shoulder of lamb, leaving only about an inch and a half of the knuckle. Mince a little of the meat from the inside with some bacon fat, pepper, and salt, and lay it on the inner side. With a large needle and coarse thread, gather together the circumference of the meat, press it flat, and fasten the little bone as a handle in its proper place. Then lay at the bottom of a

stewpan a large sliced onion, half a lemon without any of the peel, three small carrots cut lengthwise, and one clove; on these lay the lamb, and around it put strips of bacon; throw in a little parsley, and cover the meat with veal broth. Set the pan on a very slow fire, and plain wood embers on the lid. Simmer for two hours. Keep the meat hot while the gravy is being strained, and add to it a little *velouté*; boil very quickly, and pour it over the lamb. It may be served with either cucumber or tomato sauce.

LAMB, SHOULDER OF, FORCED.—Take out the bone from the shoulder, and be careful in removing it, not to cut a hole through the skin; when this is done, fill up the vacancy with some good veal forcement, covering it with fat bacon or ham; then put it into a good braise and let it boil gently for about an hour, and when required glaze it well; after the forcement has been put in and the incision sewed up, it may either be made into the form of lamb, or made to resemble a swan by adding the shank bone for a neck, and forming the beak or bill of paste; if plain, put an ornamented paper ruffle round the shank bone. It may be served with peas, spinach, or asparagus, and with cucumber or sorrel sauce.

LAMB, SLICES OF, FRIED.—Cut some cold lamb into slices, season and fry them; when done, put them in a dish, and pour over them melted butter; then put a little flour into a saucepan, with some beef stock and a little walnut pickle; let this boil and keep continually stirring. Serve the slices in this sauce, and garnish with fried parsley.

LAMB STEAKS.—To dress the steaks *white*, stew them in milk and water till very tender, with a bit of lemon-peel, a little salt, and some pepper and mace. Have ready some veal gravy, and put the steaks in it; mix together some mushroom powder, a cupful of cream, and a little flour; shake the steaks in this liquor, stir it, and let it become quite hot, without suffering it to boil. Just before it is dished up put in a few white mushrooms. To dress the steaks *brown*, season them with pepper, salt, nutmeg, grated lemon-peel, and chopped parsley; but dip them first into egg; fry them quickly. Thicken some gravy with a little flour and butter, and add to it a tablespoonful of port wine.

LAMB, TO CARVE.—The principal joint of lamb is that known as the fore quarter, to carve which the shoulder must be divided



and raised entirely from the breast in the direction of the letters *a b c d*. A slice of

butter sprinkled with cayenne und salt is then usually laid between them, and a little lemon-juice is added. The shoulder may then be removed or not into another dish, as is most convenient. The brisket is next separated from the long bones in the blue *e, f*, and carved in the direction *g h*; the rib-bones are divided from *i t* to *j f*. The choice of the different parts is offered in serving them. For the various other joints, as the leg, shoulder, &c., see MUTTON, TO CARVE.

LAMB'S BRAIN CAKES.—Take the brains, and remove any blood, &c., that may be among them, chop them small, and add salt, nutmeg, and pepper, a little raw egg, and flour enough to cause them to adhere together; mix thoroughly, form into cakes about the size of a crown piece, and fry them brown on both sides with lard.

LAMBS' EARS.—Take about a dozen lambs' ears and braise them till they are tender, chop a large handful of sorrel, and stew it in a little stock with a small piece of butter added; pour in a teacupful of callis, season with pepper, salt, and grated nutmeg; stew for a minute, then twist the ears up neatly and serve.

LAMBS' FEET.—After having well scalded and cleaned the feet, take the bones out and put the meat into a stewpan, with five or six table-spoonfuls of velouté and some chopped parsley, thicken the sauce with an egg, and put it over the feet, shaking the stewpan well; add a little lemon-juice and whole pepper; if the feet are bought in a parboiled state they will require but little stewing, and must not be allowed to boil.

LAMB'S HEAD.—Boil a lamb's head and a lamb's pluck till tender, taking care not to dress the liver too much; take out the head and score it in every direction with a knife. Then grate some nutmeg over it, and lay it on a dish before a brisk fire; strew over it bread crumbs, sweet herbs rubbed, a little lemon-peel finely chopped, and a slight seasoning of pepper and salt; add a little butter and flour, and just as it is done baste and dredge it; chop half the liver, the heart, the lights, and tongue, very small, and add to these about eight table-spoonfuls of gravy or water; then shake some flour over the meat and stir it together; put into the gravy or water a large piece of butter rolled in flour, a little pepper and salt, and the gravy that runs from the head, into the dish; simmer them all together for a few minutes, and add half a spoonful of vinegar; put it into the dish and place the head in the midst of the mince-ment; have ready the other half of the liver cut into thin slices, with some rashers of broiled bacon; lay these around the head, garnished with lemon, and serve.

LAMB'S HEAD STEWED.—Take out the brains and make a forcemeat of them; boil it, and when cold cut it into pieces; then mince some lamb and beef suet together with the brains; add some grated bread, season with salt, pepper, and sweet herbs minced small; add four or five raw eggs; fill the lamb's head with these, then put it

into a stewpan, and let it stew with some good stock; make the remainder of the mince-meat into balls, and serve with the stewed head.

LAMB'S LIVER.—Cut a sound fat liver into long thin slices, soak them in water, dry them in a cloth, and flour them; fry of a rich brown in plenty of fresh butter or lard; minced shalots or young onions, with cayenne and pepper may be added to the fry; serve with hot gravy and stewed cucumbers, or with cucumber sauce; garnish with fried parsley.

LAMB'S SWEETBREAD CUTLETS.—Blanch the sweetbreads for about ten minutes, and put them to cool in cold water; then take them out, and dry them in a cloth; cut lengthwise twelve or fourteen pieces for cutlets; lay the cutlets in the pan with some fresh butter or lard, add a little lemon-juice, and a slight seasoning of pepper and salt; when done take them up and lay them upon white paper, in order that the grease may be absorbed; dish them thin, with the sauce poured over them.

LAMB'S SWEETBREAD PIE.—Take eight lamb sweetbreads, soak out all the blood from them, and cut them into small thin pieces; trim them all to the same size and shape; take a quarter of a pound of butter, the same of grated bacon, a dessert-spoonful of parsley, two of mushrooms, and one shalot, all minced small; add a slight seasoning of pepper, salt, and nutmeg; when the butter is melted put the sweetbreads into this, and simmer them for twenty minutes over a moderate fire, turning them frequently, in order that both sides may be equally done; make a good raised crust, at the bottom and around the sides of which lay in some forcemeat; put the sweetbreads cold on this, add to them the herbs in which they were cooked, together with two bay leaves, and some slices of bacon; cover with a crust, and place it in a brisk oven; as soon as the top is of a light brown colour, cut round the edge and cover it with a large piece of paper folded four times; an hour and a half will be sufficient to bake it; then take off the top, remove the bay leaves and the bacon, drain away the fat, pour in some rich gravy mixed with any sauce preferred, and serve.

LAMBS' SWEETBREADS, STEWED.—Make a forcemeat of the tenderest parts of boiled or roast fowl, some bacon, a little parsley chopped, thyme, lemon-peel, the yolks of two eggs, and a seasoning of cayenne pepper and nutmeg; put the sweetbreads into a pan upon a layer of slices of veal, cover them with slices of bacon, add a hunch of sweet herbs, an onion sliced, a little mace, and pepper and salt; pour in a quart of good broth, and stew for two hours; remove them, and reduce, by boiling the broth, to a fourth; heat the sweetbreads in it, and garnish with slices of lemon.

LAMBS' SWEETBREADS, FRICASSEED.—To fricassee sweetbreads white, blanch, and cut them in slices. To a pint of veal gravy put a thickening of flour and butter, a table-spoonful of cream, half a teaspoonful of mushroom powder, grated lemon-peel, a

nutmeg, and a little white pepper. Stew for ten minutes, add the sweetbreads and let them simmer for twenty minutes. Dish, add salt, thin pieces of lemon-peel; mix up, and serve. *To fricassee sweetbreads brown.* Cut them into small pieces, flour and fry them. When of a rich brown, pour over them a pint of beef gravy, highly seasoned; stew gently, until the sweetbreads are tender. Add a little flour and butter to thicken; flavour with mushroom ketchup, and serve.

LAMBS' TAILS.—Braise or boil the tails, and make a light batter of flour, one egg, a little salt, white wine, and oil. Fry them of a delicate brown colour, and serve them garnished with fried parsley, and with any sauce preferred.

LAMBS, TO REAR.—It is the duty and would be to the interest of the farmer to attend to the comfort of ewes and lambs at the lambing season; therefore, the lambing field should always be a sheltered one, and there should be a retreat for the weakly and the cold. The first care of the shepherd is, to examine the newly dropped lambs. If they are chilled and scarcely able to stand, he should give them a little of the milk, which at this season he should carry with him, and then take them to some shelter, or place them in a basket well lined with straw. Nursing of this kind for an hour or two will usually give the animal sufficient strength to enable it to rejoin its mother. In every case of a ewe refusing to let her own lamb suck, the shepherd should particularly examine the state of the udder, and ascertain the cause of uneasiness; and if it be inflammation, remedial measures must be adopted as follows: Put the ewe into the shed and confine her to a certain spot by a short string tied above the fetlock joint of one of her fore-legs, and fastened to a stot driven into the ground, or to the hurdle. As she endeavours to leave her lamb, the string pulls her foot from off the ground, and while the struggling with the string absorbs her attention, the lamb seizes the teat and sucks in the meantime. This stratagem frequently repeated, induces her to take with the lamb. When a gimmer that has little milk has twins at a time, and another ewe that has plenty of milk produces a single lamb, it is for the benefit of one of the ewes and two lambs, that the ewe which has plenty of milk should bring up two lambs; and the transference is easily accomplished while all the lambs are still wet, and two of them are placed before the ewe at the same time; but when a ewe does not die until two or three days after she has lambed, it will be difficult to make another ewe that lambs a single lamb at the time the other ewe dies, take the older lamb along with her own. The usual plan is, to rub the body of the older lamb with the newly dropped one, before the ewe that has recently lambed has an opportunity of recognising her own lamb, and to place both before her at the same time. She should then be placed in a dark corner of the shed, and confined in it by a board placed across the corner, only giving her room to rise up and lie down, and to eat, but not to turn

quickly round upon the stranger lamb to box it; while, rubbing itself against her wool, and sucking her against her inclination, it will acquire the odour of her own lamb, and ingratiate itself in her favour. Another troublesome case is, when the lamb dies at birth and the ewe has plenty of milk, while another ewe has twins which she is unable to support. The expedient is, to let the ewe smell her own new-born dead lamb, and then to strip the skin immediately off it, and sew it to the body of one of the lambs belonging to the other ewe, and present the foster-lamb to her. Should all these expedients fail, the lambs should be taken away and brought up as pets upon cow's milk. The milk should be given to them warm from the cow; the quantity, as much as they can drink. In the intervals of meals in bad weather they are kept under cover, but in favourable weather they are put into a grass paddock during the day, and under shelter at night until the nights become warm. They are fed by hand out of a small vessel, which contains as much milk as it is known each can drink. They are first taught to drink out of the vessel by the aid of the fingers, as explained when treating of the calf, and as soon as they can hold a finger steady in the mouth, a tin tube about three inches in length, and the thickness of a goose quill, should be neatly and securely covered with folds of linen and used as a substitute for a teat; by this means they will readily drink their allowance of milk. When the same person feeds the lambs, as the dairy-maid, for instance, the lambs soon become attached to her and will follow her everywhere; and to prevent them bleating in her absence, and annoying her during the day, an apron or piece of cloth hung upon a stake or a bush in the paddock, will content them and keep them together in quietness. The *cuckoo* lambs will require the particular attention of the shepherd. These are those that are dropped from the middle of April to the beginning of May, when the cuckoo is just making her appearance, and after which bird they are named. Care must be taken that they have sufficient but not too nutritive food; and that the diseases to which weakly lambs are subject, are promptly attended to. In two or three weeks, and often considerably sooner, the lambs will begin to nibble a little grass. In this, great caution is required; the sheepowner should determine whether or not the grass is too luxuriant, as much mischief frequently arises in the sudden change from bare to luxuriant pasture. It often sets up a degree of inflammatory fever which no depletion will extinguish, and no astringent can check. The technical term applied to lambs diseased from this cause, is *gall-lamb*. The liver seems to be the principal seat of inflammation, and a great quantity of bile or gall is found in the duodenum and small intestines. It is a disease which very speedily runs its course, occasionally carrying off its victims in little more than twelve hours, and seldom lasting more than three days. Immediate bleeding in the early stage, and afterwards Epsom

salts, with a small portion of ginger, will afford the only chance of cure. If, during the period of suckling, the udder of the ewe should become unnaturally enlarged, accompanied by redness, and the appearance of knots and kernels, the lamb must be taken away, and the udder well fomented with warm water; an ointment composed of a drachm of camphor, rubbed down with a few drops of spirits of wine, a drachm of mercurial ointment, and an ounce of elder ointment, well incorporated together, must be rubbed into the affected part, or the whole of the udder, two or three times a day; she must also be bled, and the physic repeated. If the udder should continue to enlarge, the heat and tenderness increase, the knots or kernels become more numerous and of greater size, and some of them should begin to soften and give signs of containing a fluid, no time must be lost in resorting to remedial measures. A deep incision must be made into that part of the udder where the swellings are ripest, the pus or other matter squeezed out, and the part well fomented again. To this should succeed the application of a weak solution of chloride of lime, with which the ulcer should be well bathed two or three times in the day. When all fetid odour ceases and the wound assumes a healthy appearance, the friars' balsam may be substituted for the chloride of lime. *The time of weaning* differs materially, according to the locality of the farm and the quality of the pasture. In a mountainous country and where the land is poor, the weaning often takes place when the lamb is not more than three months old, for it requires all the intermediate time to prepare the ewes for the market. In a milder climate, and on better pasture, they need not be weaned until four months old. On the other hand, if the pasture is good, and especially if it is the system, or to the interest of the farmer, to sell his lambs in store condition, they frequently are not weaned until they are six months old. In weaning, the first thing to be attended to, is to remove the ewes and lambs as far as possible from each other. Two or three days before the time arrives of their being parted, the ewes and the lambs should be removed to the pasture, which the latter are afterwards to occupy; and then in the evening of the appointed day, the ewes are to be driven away, probably to the pasture which they had occupied with their lambs, or if they are moved to another it should be a poorer and barer one. It will be advisable to milk them two or three times, in order to relieve their distended udders, and to prevent an attack of inflammation. In a day or two they will be tolerably quiet. The management of the lambs will depend on the manner in which the farmer means to dispose of them; but at all events they should be turned out to somewhat better pasture than that to which they had been accustomed, in order to compensate for the loss of the mother's milk. At the same time, care must be taken that the lamb is not overfed, lest some acute disease should speedily carry him off. One of the most fatal diseases to which lambs are subject is

diarrhoea, arising from cold, or from some fault in the mother's milk, or from the new stimulus of the grass when the lamb first begins to crop it, or from its overpowering stimulus at the weaning time, when it constitutes the only food of the animal. While the animal feeds and plays there is no danger; but when the eyes are heavy and the step is slow and sluggish, and the wool begins to look deranged, there is no time to be lost. A gentle aperient is first indicated to carry off any offensive matter that may have accumulated in, and disturbed, the bowels; half an ounce of Epsom salts, with half a drachm of ginger, will constitute the best aperient that can be administered; this must be accompanied by tender treatment and careful housing and nursing. The next disease to be mentioned is one of a mingled character. The milk of the mother is no sooner received into the true stomach of the lamb, than by the action of the gastric juice it undergoes a sudden change; a portion of it is converted into a firm curd, while the other retains its liquid form, but is altered in character and becomes whey. When either the milk of the mother or the stomach of the lamb is not in a healthy state, this change takes place in a more decisive manner; the curd is hardened and retained, and sometimes accumulates to an incredible extent, and the whey pressed out in greater quantity, finds its exit through the bowels, and gives an appearance of purging of a light colour. In the natural and healthy state of the milk and the stomach, this curd afterwards gradually dissolves and is converted into chyme; but when the one takes on a morbid hardness, and the other may have lost a portion of its energy, the stomach is sometimes literally filled with curd, and all its functions are suspended. The animal labours under seeming purging from the quantity of whey discharged, but the actual disease is constipation. In such cases, magnesia should be administered; suspended in thin gruel, or ammonia, largely diluted with water; and with these should be combined Epsom salts, to urge the dissolved mass along, and ginger to excite the stomach to a more powerful contraction. Read's stomach pump will be found a most valuable auxiliary. A perseverance in the use of these means will sometimes be attended with success, and the little patient, being partially relieved, the lamb and the mother should be removed to somewhat barer pasture. Lambs are very subject to fever, rapidly degenerating into inflammatory fever. It is sudden in its attack, and usually confined to the best conditioned and most thriving lambs of the flock. If taken in time, the loss of a little blood, or the administration of a tolerable dose of Epsom salts, will generally arrest the malady in its commencement. In some cases, and when the lamb has been hurried on too fast for the early market, the stage of simple fever will scarcely be recognised, but the animal will be suddenly taken with what is termed "staggers." Perhaps, an hour before the attack the animal will be in perfect health; then,

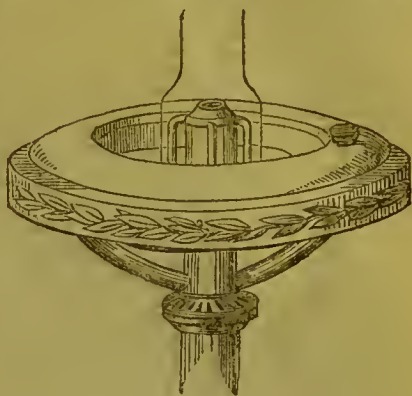
almost without warning, he becomes evidently ill; the head is protruded, and the walk is staggering, or the lamb stands still, unable to walk at all; then he falls, and after a short struggle, dies. The whole flock being exposed to the same exciting cause, the disease soon spreads, so that a dozen lambs have been lost in less than as many hours. The lancet, physic, and comparative starvation, will afford the only means of cure and prevention.

LAMP.—In many households the lamp is still preserved as a medium for giving light, in preference to candles or gas. Numerous improvements have been made upon the original form and kind. One of the best of these is that known as the argand lamp, represented in the engraving: *a* is the re-

servoir for oil; *b*, the cistern supplied from the reservoir, and from which the oil flows to the burner, *c*, through the branch, *d*. In the original construction of this lamp, there was an imperfection in the glass chimney which has been removed by a subsequent improvement. This is principally achieved by an alteration in the shape of the glass, which, instead of being of equal

width throughout, is contracted at the level of the flame, as at *c*, by which the current of ascending air is made to turn out of its course when it arrives at this shoulder, and is propelled against the top of the flame just where the smoke is beginning to part, which, in consequence, is destroyed almost entirely. The lamp known as the annular, and represented in the annexed figure, is that which is generally used for the table. In the original construction of Argand's lamp, the reservoir for the oil was placed on one side of the flame; and consequently, the light being obstructed by it, there was a strong and inconvenient shadow on that side. To obviate this imperfection, the annular lamp was contrived. The ring of metal contains the oil which descends below the burner, by tubes—a construction which is extremely simple, and consequently not liable to get out of order: there is a cap, by unscrewing which, the oil may be poured into the reservoir. The construction of the burner is on Argand's principle. Among the most recent introductions is that known as the paraffine lamp, which is admirably adapted for working or reading by, and which, in addition to

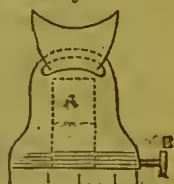
simplicity of construction, has smallness of cost to recommend it. The lamps may be obtained from two shillings upwards,



and the oil costs three shillings and three-pence a gallon, which quantity will last a month. In lighting this lamp, a little care and attention are required, so as to avoid an uncertain light and an unpleasant smell; and the proper manner of proceeding will be best illustrated by the aid of the accompanying engravings. The cotton, *A*, is first

Fig. 1.

Fig. 2.



raised by the screw, *B*, to the height indicated in *fig. 1*. It is then lowered by the screw until it is a little below the opening of the tube, as shown by the dotted lines surrounding *A* in *fig. 2*. The light produced is then clear and brilliant, and will burn without smell, and without requiring any further attention. In order to ensure a more perfect working, it is better to fill the lamp with fresh oil each evening before using it. One of the objections against the use of lamps is, that the oil is liable to be spilt from them; but this can only result from carelessness, and with proper management can never occur. Another objection is, the trouble which they are supposed to entail, but this evil is exaggerated, for a few minutes daily is all the time that need be expended upon them. To ensure the proper use and management of lamps, it would, perhaps, be better to assign them to the care of some one person in the household, giving him instructions to remove them when no longer required, to a place of safety. A very curiously contrived night lamp, is one constructed to burn without a flame on the following principle. If a cylindrical

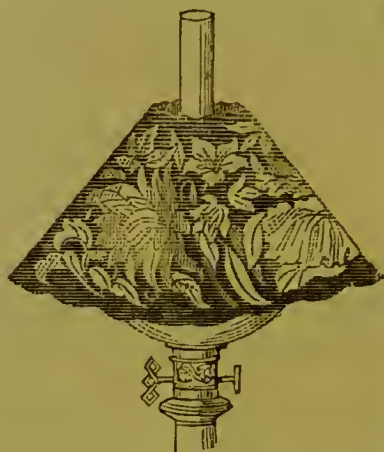
coil of very thin platina wire be placed partly round the wick of a lamp with spirits of wine, and partly above the wick, and the lamp be lighted so as to heat the wire to redness; on the flame being blown out, the mere heated vapour rising from the spirits of wine will be sufficient to keep the upper part of the wire red-hot for any length of time that the spirit remains. This beautiful and simple contrivance will give sufficient light to see the hour of the night by a watch, or to do anything which requires a limited light, and will not be so liable as a flame to

disturb persons unaccustomed to burn a light. It has also the convenience of being always the same, requiring no trimming, and being peculiarly safe, as it can emit no sparks. The size of the platina should not exceed one hundredth part of an inch. A coil of twelve turns is sufficient. When the wire collects a crust round it, it may be brightened, and made to act as well as at first,

by uncoiling and rubbing it with fine glass paper. The safety lamp, invented by Sir Humphry Davy, consists of a common oil lamp surmounted with a cylinder of wire gauze, the apertures of which are not greater than the $\frac{1}{20}$ th of an inch square, and the wire of which it is made of the $\frac{1}{30}$ th to the $\frac{1}{50}$ th of an inch in diameter. The fire damp (carburetted hydrogen) of coal mines, in passing through the meshes of such gauze, gets cooled by the conducting power of the wire below the point necessary to kindle it. When this lamp is taken into an explosive atmosphere, although the fire damp may burn within the cage with such energy, as sometimes to heat the metallic tissue to dull redness, the flame is not communicated to the mixture on the outside. These appearances are so remarkable, that the lamp becomes an admirable indicator of the state of the air in different parts of the mine, and if its admonitions are attended to, gives the miner time to withdraw before an explosion takes place.—See CANDLE LAMP.

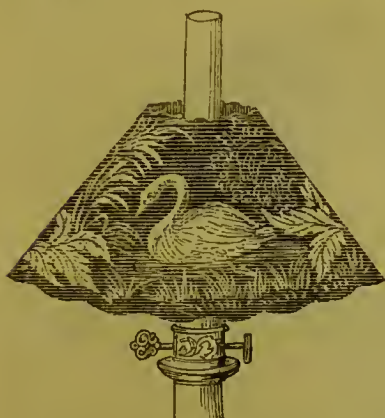
LAMP SHADES.—These useful appendages of the lamp may be fashioned of exquisite beauty, and in endless variety, by a process at once simple and inexpensive; and the two illustrations appended hereto will convey some idea of the rich effects which can be produced by the simplest materials. In addition to the designs here presented, snow scenes, waterfalls, moonlight scenes, ruins of castles, groups of animals and of fruit, &c., may be produced accordlog to the skill and taste of the manipulator. The materials simply consist of glazed cardboard, of a medium thickness, a few sheets of tissue paper of various colours, a blacklead pencil and a little gum or paste; a few cake water-colours may be used or be dispensed with, at option. The tools consist of a cutting board of rather

hard wood, a sharp penknife, a pair of scissors, a stout pin, and a large needle or two, such as those used for stockings or for knitting. The art of making the lamp shades simply consists in cutting the outlines, and the leading lines necessary to denote the form of any object which it is desired to represent. In order to obtain a good shape for the lamp shade, cut one out of a piece of old newspaper or a sheet of thick brown paper. Fit it on to the lamp, and when a well-fitting shape is obtained, proceed to cut out the shape in the glazed



cardboard. The flower pattern lamp shade, seen in the engraving, is made in precisely the same manner, with the exception that for this shade a white glazed cardboard is used, and coloured tissue papers, of the richest colours that can be obtained, are laid underneath to give the proper colours to the flowers, and green paper for the leaves. Roses, fuchsias, dahlias, corysanthemums, tulips, lilies, &c., may all be represented with beautiful effect; and where peculiar tints upon coloured grounds are required, they may be obtained by colouring in water-colours the spots or shapes upon the tinted papers that are laid underneath. The shade should be lined in and finished with white tissue paper, which not only conceals the patchwork from the eye, but moderates the light, so as to produce a very soft and pleasing effect. The swan pattern lamp shade, of which an illustration is given, is made thus:—The cardboard is green glazed, and the green is kept on the outside. The white lines shown in the drawing indicate simply the cuts with the penknife, by which large, broad leaves, water, rushes, and a willow tree are formed. The leaves, &c., are cut through from the green side, but the dotted heads of flowers, rushes, &c., are punctured through with a pin or large needle from the inside, which gives them a more open and free appearance than could otherwise be obtained. The shape of the swan is cut out of the green cardboard, and a corresponding shape

in white cardboard is cut and let in, and is fixed in position simply by a piece of white tissue paper gummed on the back. The bill of the swan is rendered yellow by a piece of yellow tissue pasted at the back; and the upper part of the bill and the feet are rendered black, either by a piece of black paper



pasted over them at the back, or by a thick coating of Indian ink, or common ink. This is all that is required to produce a most beautiful effect. When the whole is completed, it is to be lined throughout with tissue paper merely gummed at the top and bottom edges. The ends of the shade are to be firmly gummed together and strengthened by a strip of paper on the inside. The feathers of the swan are indicated by cuttings with the penknife, just as the other effects are produced. The black lines in the engraving on the body of the swan, show the character of the cuttings. The cardboard should be sufficiently opaque to prevent the passage of light in any part where an effect is not sought to be obtained. And to this end it may be necessary, in some instances, to line the shade with a dark-coloured paper. A very beautiful shade of poppies and wheat ears may be made with great ease, and is probably one of the simplest patterns to begin with. Before lining the shade, hold it to the light, and show the effect. Open the leaves of the flower, &c., to let the light pass through with greater power in some parts than in others. This will give richness and freedom to the design. Also, before lining, deepen the shades in some parts by additional layers of dark coloured paper, and do away with any appearance of patchiness from the paper behind, either by laying on an additional layer of paper, or by removing edges of cuttings, where they have a tendency to show through.

LAMPS, TO CLEAN.—Bronzed lamps should be wiped carefully; if oil be frequently spilled over them, it will cause the bronzing to be rubbed off sooner than it would disappear by wear. Brass lamps are best cleaned with crocus, or rotten-stone

and sweet oil. Lacquered lamps may be washed with soap and water, but should not be touched with acid or very strong lye, or the lacquer will soon come off. When lamps are foul inside, wash them with potash and water, rinse them well, set them before the fire, and be sure they are dry, before oil is again put in them.

LAMPS, TO PREVENT SMOKING.—To prevent or lessen the smoking of lamps, the wicks should be well soaked, either in dilute muriatic acid, well washed in water, and afterwards dried, or in strong vinegar, when they will merely require drying. Large lamps, that emit much smoke, should be burnt under a funnel, to carry the smoke off; or a large sponge dipped in water may be suspended over them. In all cases the wick should not be turned too high.

LAMP BLACK.—To make this pigment on a small scale, suspend over a lamp a funnel of tin plate, having above it a pipe, to convey from the apartment the smoke which escapes from the lamp. Large masses of a very black carbonaceous matter, and exceedingly light, will be formed on the summit of the cone. This carbonaceous part is carried to such a state of division as cannot be given to any other matter, by grinding it on a piece of porphyry. It may also be rendered drier by calcination in close vessels. The funnel ought to be united to the pipe, by means of wire, because solder would be melted by the flame of the lamp.

LAMPREY.—This fish is in general appearance very like the eel; but instead of the flat mouth which that fish exhibits, the lamprey has a sucking apparatus, by which it attaches itself to stones, roots of trees,



and piles, and then lies with its body quite at rest, except as moved by the current. The lamprey is an inhabitant of the ocean, ascending rivers chiefly during the latter part of winter and the early months of spring; and, after a residence of a few months in fresh water, it again returns to the sea. This fish is in season during March, April, and May, and they are observed to be much firmer when just arrived from sea than when they have been a considerable time in fresh water.

LAMPREYS POTTED.—Remove the cartilage of the fish and the string running down each side of the back, but allow the skin to remain. Wash and clean the fish thoroughly in several waters, and wipe them dry. To a dozen tolerably-sized fish, use two ounces of white pepper, salt in pro-

portion, six blades of mace, a dozen cloves, all in fine powder, and with this season the fish, after it has drained all night. Then lay them in a stone jar one by one, curled round, the spices and salt being sprinkled on and about them. Clarify two pounds of butter and half a pound of beef suet, pour it over the fish, and lay thick paper on the top to keep in the steam. Bake the fish for three hours in a moderate oven. Look at them frequently, and as the oil rises, clear it off. They will thus keep until the spring.

LAMPREYS STEWED.—After cleaning the fish carefully, remove the cartilage which is to be found in the back, and season the fish with a small quantity of cloves, mace, nutmeg, pepper, and allspice; put it into a small stewpan, with as much strong beef gravy and white wine in equal quantities as will cover it. Close the stewpan securely, stew the lampreys till tender, then take them out and keep them hot, while you boil up the liquor with two or three anchovies chopped, and a little flour and butter; strain the gravy through a sieve, and add lemon-juice and some made mustard. Serve with sippets of bread and horse-radish.

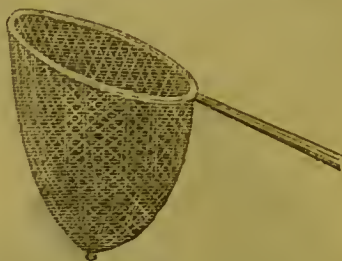
LANCASHIRE CAKE.—Beat up together eight eggs and a pound of powdered sugar, for three-quarters of an hour; then, by degrees, mix in twelve ounces of fine flour well dried; add two ounces of caraway seeds and bake in soup plates or in tins in a brisk oven.

☞ Eggs, 8; sugar, 1lb.; flour, 12ozs.; caraway seeds, 2ozs.

LANCERS QUADRILLES.—The various figures of this popular dance are as follows:—*La Rose*. First gentleman and opposite lady advance and set, turn with both hands, retiring to places; return, leading outside, set and turn at corners. *La Ledoisica*—First couple advance twice, having the lady in the centre. Set in the centre; turn to places; all advance in two lines; all turn partners. *La Dorset*—First lady advance and stop, then the opposite gentleman; both retire, turning round; ladies' hands across half round, and turn the opposite gentleman with left hands; repeat back to places, and turn partners with left hands. *L'Etoile*—First couple set to couple at right; set to couple at left; change places with partners, and set pirouette to places, right and left with opposite couple. *Les Lancers*—The grand chain. First couple advance and turn, facing the top; then the couple at right advance behind the top couple; then the couple at left, and the opposite couple do the same, forming two lines. All change places with partners and back again. The ladies turn in a line on the right, the gentlemen in a line on the left. Each couple meet up the centre. Set in two lines, the ladies in one line, the gentlemen in the other. Turn partners to places; finish with the grand chain.

LANDING NET.—This is a very necessary article in the outfit of an angler. It is made of silk or hemp, either dressed with a waterproof composition or not, according to the taste of the user; the net is stitched

over a ring either of iron, brass, cane, or whalebone, jointed or unjointed, and attached to a landing stick of suitable length. The Irish whalebone net frame, with a telescope three-jointed handle, is the most convenient for use, being portable, and



easily packed up for carrying. Care, however, should be taken in using it, not to let the weight of the fish bear upon the framework; this can be accomplished by drawing instead of lifting the fish out of the water.

LANDLORD AND TENANT, LAWS RELATING TO.—The landlord is he of whom land or tenements are taken. Tenant signifies one that holds or possesses land or tenements by any kind of right, either in fee for life, for years, or at will. In taking a house, a person should carefully examine the covenants in the lease, and those in the underlease, if any, or he may possibly discover, when too late, that he is tied down by such restrictions as to render the house unfit for his purpose, or likely to involve him in unforeseen difficulties. He should take care that all arrears of rent, the ground-rent, and all taxes, are paid up to the time he takes possession; for if they are not, he must pay all arrears, and can only recover them by having recourse to the last tenant. Houses are considered as let for the year, and the tenants are subject to the laws affecting annual tenancies, unless there be an agreement in writing to the contrary. When taking a house for a year, it is advisable to have a written agreement drawn up somewhat as follows:—

Memorandum of an undertaking, entered into this day of 185, between A. B. of and C. D., of, as follows:—

The said A. B. doth hereby let unto the said C. D. a dwelling-house, situate in in the parish of, for the term of one year certain, and so on from year to year until half a year's notice to quit be given by or to either party, at the yearly rent of pounds, payable quarterly; the tenancy to commence on day next.

And the said A. B. doth undertake to pay the land-tax, the property tax, and the sewer rate, and to keep the said house in all necessary repair, so long as the said C. D. shall continue therein; and the said C. D. doth undertake to take the said house of A. B. for the before-mentioned term and rent, and to pay all taxes, except those on

land, or property, and the sewer rate, and to observe the other conditions aforesaid.

Witness our hands this day of
185 .

Witness, E. F.

A. B.
C. D.

If the landlord agree to pay all the rates and taxes, then a different wording of the agreement should be adopted, as thus:—

And the said A. B. doth undertake to pay all rates and taxes, of whatever nature or kind, chargeable on the said house and premises, and to keep the said house in all necessary repair, so long as the said C. D. shall continue therein.

If the landlord agree to secure the incoming tenant from all arrears due on account of rent, rates, and taxes, the indemnification should be written on a separate paper, and in something like the following terms:—

I, A. B., landlord of a certain house and premises, now about to be taken and occupied by C. D., do hereby agree to indemnify the said C. D. from the payment of any rent, taxes, or rates in arrear, prior to the date of the day at which the said tenancy commences. As witness my hand, this
day of 185 .

A. B.,
Landlord of the above premises.

Witness, E. F.

Sometimes a house is taken for a term of three years certain; under which circumstances an agreement may be drawn up, somewhat in the following terms:—

Memorandum of an agreement made the
day of 185 , between

A. B., of and C. D. of ,
as follows:—

The said A. B. doth let unto the said C. D. a house (and garden, if any) with appurtenances, situate in , in the parish of , for three years certain. The rent to commence from day next, at and under the yearly rent of pounds, payable quarterly; the first payment to be at day next.

The said C. D. doth agree to take the said house (and garden) of the said A. B. for the term and rent, payable in the manner aforesaid; and that he will at the expiration of the term, leave the house in as good repair as he found it (wear and tear excepted).
Witness our hands.

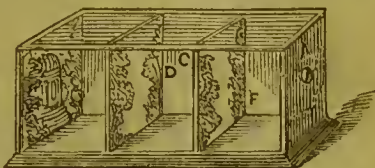
Witness, E. F.

A. B.
C. D.

A person taking a house under either of these agreements is for the time being the *bona fide* possessor of the tenement, and no person can dispossess him without rendering himself liable to an action for trespass. Even the landlord himself cannot enter the premises forcibly without being considered a trespasser; and if he wishes to enter the house to view repairs, or for any other purpose, he can only lawfully do so by the leave of the tenant.—See LEASE, LODGERS, NOTICE TO QUIT, RENT, &c.

LANDSCAPE, ARTIFICIAL.—Procure a box about a foot long, eight inches wide, and six inches high, or any other dimen-

sions you please, so that they do not vary greatly from these proportions. At each of its opposite ends, in the inside of the box, place a piece of looking-glass which fits



exactly; but at that end where the sight-hole A is, scrape the silver off the glass, so that the eye may have an uninterrupted view of the objects. Cover the box with gauze, over which place a piece of transparent glass, which is to be fastened securely in. Let there be two grooves at each of the places, C, D, E, F, to receive two printed scenes, arranged as follows: On two pieces of pasteboard let there be skillfully painted, on both sides, any subject you desire, as woods, bowers, gardens, houses, &c.; and on two other boards the same subject on one side only, and cut out all the white parts: observe also that there ought to be in one of them some object relative to the subject placed at A, that the mirror placed at B may not reflect the hole on the opposite side. The boards painted on both sides are to slide in the grooves at C, D, E, F, and those painted on one side are to be placed against the opposite mirrors A or B; then cover the box with its transparent top, and place it in a strong light, so as to heighten its effect. When thus complete, and viewed through the sight-hole, the objects will present an unlimited prospect of rural scenery, gradually losing itself in the distance, and will be found to repay amply the pains bestowed upon its construction.

LAND STEWARD.—The land steward is to a whole estate what a bailiff is to the demesne or a particular farm. His business is to control the managers of the land in hand, as the forester, gardener, bailiff, &c.; to see that farmers fulfil the covenants of their leases; to attend to repairs, roads, public, and parochial matters on behalf of the landlord; and generally to receive rents. The situation of the land steward's place of business should be under the roof of the proprietor's principal place of residence, round which and in its neighbourhood some considerable part of his estate may be supposed to lie. The accommodations requisite for a principal office are, a commodious business room, a small ante-room, and a strong room, fireproof, for depositing valuable documents in. A general map of the whole estate on a large scale is obviously requisite, and portable separate maps, with accompanying registers and other descriptive particulars. Books of valuation are essential, and in these should be contained the number, name, and estimated value of each field, and every parcel of land, as well as of each cottage or other building not being part of a farmstead on the several

distinct parts or districts of the estate, the valuations being inserted in columns, as they arise, whether by general surveys, or incidentally, headed with the names of their respective valuers, so that whenever a farm is to be re-let, these columns may be consulted, and the real value of the property fixed in a re-survey with the greater exactness. A general register of timber trees, copsewood, and young plantations, is particularly wanted where there is much hedgerow timber. Contracts, agreements, accounts, letters on business, and other documents, should be intelligibly indorsed, dated, and numbered, and arranged so as to be easily referred to. Among the instruments necessary for a land steward's office may be included those requisites for surveying, mapping, levelling, measuring timber, and every description of country work; together with boring machines, draught measures, weighing scales, some chemical tests, models, and such other articles as may be required or rendered useful by particular circumstances. An agricultural library may be considered an essential requisite, including works on rural architecture, the prices and measuring of work, and other fluctuating matters.

LANGUOR is that weariness and sense of fatigue without adequate cause, which, with a disinclination for any exertion, usually precedes fevers or other attacks of sickness: or it may in weakly constitutions exist without any morbid association, and, existing merely as a temporary lassitude and feeling of debility and exhaustion, come on at stated hours, and after a short continuance pass off as rapidly as it came on. When languor attacks a patient in this manner, it will generally be found to proceed from the state of the stomach and the want of food, and will in all cases yield to the exhibition of a mild stimulant, such as a few drops of spirits of lavender and barts-horn, or sal volatile.

LANTERN.—Lanterns are chiefly required in farmsteads, and other agricultural establishments. A proper form of lantern that will distribute

a sufficient intensity of light on all around, and be safe to carry to any part of a standing, amongst straw, or other inflammable material, is what is required. The safest form of lantern is that represented in the engraving. It consists chiefly of a stout glass globe, which may be knocked against a piece of timber without being fractured. It has an oil lamp which screws and unscrews into its place from below, within the foot upon which it stands, and a ring by which it is carried; and the hand is elevated enough to be protected from heat,



which escapes along with the smoke from the ventilator.

LARCH.—A valuable genus of tree, of which there are several species. Its qualities are rapid growth, flexibility, and durability in situations between wet and dry. There



are two varieties of larch generally cultivated in Great Britain—the white and the red. The white is the variety which attains the greatest dimension of timber, and is the sort most generally cultivated. No timber-tree begins to repay the expense of culture so soon as the larch does. It is a rapid growing tree, and is well adapted for almost every country purpose. The circumstances which are found favourable to the healthy development of the larch are—as to soil it is not particular, but the roots must have a constant supply of water, in order to keep the earth in which they grow in a pure state. On very arid soils, the larch never grows freely, and soon dies off with a stunted lichen-clad pole; and on flat ground where water is liable to stagnate, though the young trees may succeed for a short time, yet they are never found to prosper, but die away in a few years as soon as the mere surface turf is exhausted of its nutritious properties by the roots.

LARD.—This substance consists of the fat of the pig melted down, and in that separated from the cellular membrane in which it is contained. This melting is usually called “rendering,” and is sometimes performed soon after the pig is killed, and at other times at a considerable interval, the fat being in the meantime preserved in salt. In England, lard is chiefly made from the kidney-fat, which is the most pure and free from oily fluid; but a great deal of the foreign lard is melted down from the fat of the surface, mixed with that surrounding the kidneys, and from this circumstance is much softer than English lard. Extensive adulterations are practised in lard, by mixing flour, water, and starch, lime or alum with it, and in some cases carbonate of soda or potash, and salt. In addition to these adulterations, veal and mutton fat are also mixed with lard, in order to give the inferior

qualities the consistence which good lard ought to have. Water is easily detected by the sputtering made in melting. Flour and starch can only be discovered by the microscope, excepting that on melting lard containing these articles, an opaque body usually is seen floating in it, and generally falling towards the bottom. The saline ingredients mentioned above, require chemical tests in order to render them apparent. The uses of lard are manifold, not only for a variety of culinary preparations, but in a medical sense, as it is largely employed in the mixing of ointment, salves, &c.

LARDER.—The place set apart for keeping provisions in. The situation of the larder in relation to the atmosphere is a matter of great importance, the chief conditions being that it should be subjected to a thorough draught, and at the same time sheltered from the sun; a northern aspect is therefore the most suitable, or, next to that, an easterly one. The construction of the larder itself should be carefully attended to; it should be cool and dry, and be provided with good ventilation by windows on opposite sides, which ought to be covered with wired cloth to admit the air; and at the same time to exclude the flies, which lay their eggs on the meat, and occasion it to be what is commonly known as fly-blown; as from these eggs, if suffered to remain, maggots will be produced. The larder should be large enough to contain all the meat, dressed or undressed, in the house. It should also be furnished with strong iron meat-hooks above, and should be fitted up with separate wire safes for meat, game, and vegetables. A marble slab for making paste is also a desirable addition to a larder; together with a balance for weighing meat, and a block to chop it upon. When the thorough draught cannot be directly obtained, a large air-drain may be carried under the floor to the opposite side of the house, where a grating may be fixed, and thus free draught may be obtained.

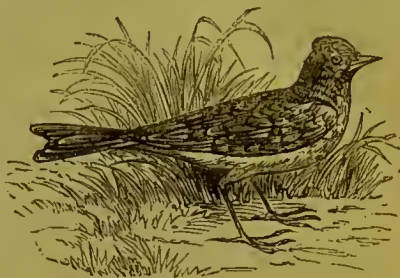
LARDING.—This is a culinary process by which lean meat is rendered less dry than in its ordinary state, and thereby not only renders the food more grateful to the palate, but makes the meat go further than it would without it. The process of larding is as follows:—Procure what is called a larding needle, which is a piece of steel from six to nine inches long, pointed at one end, and having four slits at the other to hold a small strip of bacon when put between them. Cut



the bacon into pieces, two or three inches long, and a quarter to half an inch square; put each one after the other into the needle, insert it in the meat, and leave only about half an inch out, using eight pieces to each pound. The above engravings represent the

larding needle as sold, and the same instrument with the lardoon in it.

LARK.—This bird is somewhat delicate and difficult to rear in confinement; the common field or skylark is that which is



best adapted to the cage. The time for taking these birds out of the nest is when the tail is about three-quarters of an inch in length, when they are to be fed with bread and poppy-seed soaked in milk; though ants' eggs, if they can be obtained, form a preferable diet. The young males may be distinguished by the yellow tinge of their plumage. The education of such as are taught to whistle, ought to commence before they are fully fledged, as they then begin to practise their own song; and the facility with which they adopt the song of other birds renders it necessary to hang the cage in a room by itself. When the bird is allowed to range about the room, it will thrive on the universal pastes; but if confined to the cage, they may be fed on poppy-seed, crushed hemp-seed and oats, barley, groats, malt, bread-crumbs, varied with a little watercress, lettuce, and cabbage.

LARKS ROASTED.—Larks should be roasted encased in fat bacon, and covered with vine leaves. Rub the larks over with egg, and dip them in fresh bread crumbs; sprinkle a little salt over them; roast them before a quick fire, basting with fresh butter, the spit turning rapidly.

LARKS STEWED.—Put a number of fat larks well cleaned into a stewpan, previously inserting a delicate piece of bacon into the inside of each, and adding a sufficient quantity of good stock gravy; place sage leaves over the breast of each bird, and over that a thin layer of bacon; stew them gently, and serve hot. Another way is as follows:—Bone half a dozen larks, make a forcemeat with their livers and a little veal, and an equal quantity of fat bacon, pounded finely; season with herbs and allspice; fill the larks with this; put them into a stewpan with a little good gravy; bake them for a quarter of an hour, glaze them; dish them up on a border of mashed potatoes, filling up the centre and the sides with carrots, turnips, &c., as represented in the engraving; pour a rich gravy round the dish and serve.

LARKSPUR.—The annual sorts and varieties of this flower are sown yearly in

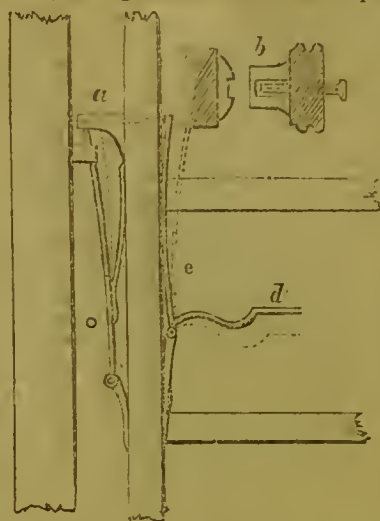
September or October, or early in spring in patches where the plants are to flower—for they do not succeed by transplantation—observing that those of the autumn sowing grow stronger, flower earlier, and the flowers are generally larger and more durable than the spring-sown plants. It is, however, proper to sow some in spring, in February, or March, to continue a longer succession of



bloom. Dig with a trowel small patches of about nine inches in diameter, in different parts of the border towards the middle, as also in the fronts of the shrubby clumps, and in each such patch sow eight, ten, or twelve seeds, a quarter of an inch deep; and when the plants are an inch or two high, thin those of the unbranched sorts to about six or eight in each patch, and of the branched kinds to three or four in each place, which is all the culture they require. But when intended to grow in beds by themselves, they are commonly sown in drills, forming them lengthwise, the beds a foot asunder, and half an inch deep. The unbranched kinds are the best adapted for this mode of culture. The perennial sorts are also raised plentifully from seeds sown in autumn or spring, in a bed or border of common earth, for transplantation when the plants come up. Weed them occasionally, and thin them to three or four inches distance; to remain till October or November; then plant them out where they are to remain to flower. Their roots will endure for many years.

LATCH.—There are a variety of latches, each more or less secure and adapted to its particular use. One of the best kind of latches for gates is that shown in the engraving, and which possesses the advantage of fixing itself so firmly that it cannot be shaken out. In this engraving, *a* is a side screw, and *b* a transverse section. The upright latch, *c*, is held in the catch by a spring, so that it cannot easily be shaken out by the rubbing of cattle, or the shaking of ladders, while it can be readily opened by a person on horseback placing the end of his

whip or stick in the hollow thumb-piece, *d*, which, acting as a lever on the upright



piece, *e*, pulls back *c*, and compresses the spring, by which the gate is opened.

LAUDANUM.—The word *laudanum* is derived from the Latin verb *laudare*, to praise, because of its excellent and most laudable qualities in the amelioration and cure of many diseases in which it had been employed; it is, perhaps, one of the oldest preparations in the pharmacy of any nation, and though made of many strengths, and by different formularies, all have possessed the same general characters. Though used as a narcotic, antispasmodic, tonic, stimulant, and anodyne, it is chiefly as a sedative that laudanum is so invaluable, there being probably no disease, class, or nature of pain or suffering in which this article has not, or may not, be employed with more or less of benefit. There is no drug or compound used in the practice of physic that, properly employed, is capable of affording so much comfort and relief to the patient, in almost every disease with which he is affected, as laudanum, for it may, by skilful combination, and a judicious adaptation of the dose, be made to exert any special or general action desired; and since the introduction of a less violent mode of practice, it has, or may, in conjunction with nitre and antimony, be depended upon for the cure of nearly every inflammation that can assail the system, and thus entirely set aside the use of the lancet in those diseases which were formerly thought only curable by depletion and bleeding. In repeated small doses, laudanum acts as a stimulant; in larger doses, as a sedative; and in full doses, as a narcotic; at the same time, by a modification of the quantity given, it may be made to act as a tonic in cases of weak digestion, as a diaphoretic in colds and influenza, and as a diuretic in affections of the kidneys; for its employment in all these affections the reader

is referred to the several diseases mentioned, and for a general account of the properties of the drug, its actions, influences, and antidotes, to the article **OPIMUM**. Laudanum is a preparation of opium made by macerating a certain quantity of opium, cut into small pieces, for fourteen days in a given amount of proof spirits, which is generally equal parts of spirits of wine, and water, shaking the bottle frequently, and on the fifteenth day filtering the liquor.

Medical men who prepare their own drugs, and know the advantage of always having a tincture that can depend on, and of a uniform strength, simmer their opium in the proper amount of water for about ten minutes, and to this, when cold, add the spirits of wine. Unfortunately the colleges of London, Edinburgh, and Dublin differ in the strength of this, as of their other preparations, the consequence of which is, that the dose of laudanum varies in each country, the dose being in Scotland 21 drops, and in England 19.

LAUNDRY.—See **CRIMPING MACHINE**, **IRONING**, **WASHING**, &c.

LAUNDRY MAID.—The duties of the laundry maid consist of washing, ironing, &c., the household linen and family clothes. The weekly employment is divided as follows. On Monday the business of the laundry begins with collecting and sorting the various articles that are to be washed, in preparing the coppers, filling them with water, and laying the fires ready for kindling. On Tuesday, the laundry maid should rise at five o'clock, light the fires under the coppers, and, as soon as the water is hot, she should commence with her assistants to wash. As it is the main object to hang out early in the morning all articles (such as sheets and body linen) which may be improved by the bleaching power of the morning air and sun, the first hours of the day should be diligently employed, and the evening should be occupied in scouring and cleaning the washhouse and the utensils which have been used. On Wednesday, the principal part of the washing being completed, the business of drying and folding the linen for the mangle and iron is to be begun, as well as that of starching and clearing the fine linen. Thursday and Friday are occupied with mangling, ironing, and getting up the whole of the linen. Saturday is devoted to separating the various articles according to the marks affixed to them, and putting by each division in its appropriate place. The rest of the day is given up to the cleaning of the laundry, and the depositing in their places all things connected with the business carried on in it.

LAUREL.—Under this title are collected several species of the plant. The common laurel, though it will grow as high as the Portugal laurel, is in its habit decidedly a shrub, though it is occasionally seen trained to a single stem as a low tree. The growth of the common laurel is rapid for an evergreen in ordinary seasons, but it suffers a great deal more from very severe frosts than the Portugal laurel, and is sometimes killed down to the ground. In Britain, the

common laurel is considered one of the most ornamental of our evergreen shrubs; and it is also used for covering walls, and for hedges to afford shelter. Laurel leaves have a bitter taste, and the peculiar flavour of prussic acid, which is common to bitter almonds. These leaves, in consequence of their flavour, are used in a green state in custards, puddings, blancmange, and other culinary and confectionary articles, but always in very small quantities. Any soil tolerably dry will suit the common laurel; but to thrive, it requires a sheltered situation, and a deep free soil.

LAVENDER.—Of this plant there are two varieties cultivated, the common and the broad-leaved; the former is smaller on the spike, but much more aromatic; the latter, however, is the most extensively grown for distillation. When grown for this purpose, the flowers should be left on the spikes and gathered when quite dry, and just before they are fully expanded. They should be cut with about six inches of stalk, and tied up in small bundles about an inch in thickness, and suspended from the roof of a dry chamber at a temperature of from sixty to seventy degrees; they will be dry in twenty-four hours, and fit for storing for use. When the flowers fall from the spikes during drying, they should be gathared up and placed in paper bags, and in this state they are as fit for use as if they had remained on the spikes. This plant is readily propagated by seeds, cuttings, or slips; the former produce the best plants. The seed is procured from France. It should be sown in March, in poor light soil; and when the plants are about two inches in height they should be transplanted into nursery beds, there to remain till the following spring, when they may be permanently planted out. Cuttings are struck in the same manner as with all other shrubby hardy plants; and when rooted, should be treated as directed above for seedlings. A dry poor soil is most favourable, and a warm situation fully exposed to the sun, the best place for it.

LAVENDER SCENT BAG.—Take of lavender flowers free from stalk, half a pound; dried thyme or mint, half an ounce each; ground cloves and caraways, a quarter of an ounce each; common salt dried, one ounce. Mix the whole well together, and put the product into silk or cambric bags. These placed in drawers with wearing apparel and linen will keep away moths and other insects, and impart an agreeable perfume to the various articles.

LAVENDER TINCTURE.—Take of cinnamon and nutmeg bruised, two and a half drachms each; red sanders wood sliced, five drachms; rectified spirit, one quart; macerate for seven days, then strain, and dissolve in the strained liquid, oil of lavender, one and a half drachms (fluid); oil of rosemary, ten drops. This tincture acts as a stimulant, cordial, and stomachic. Dose, one to three teaspoonfuls, in cases of lowness of spirits, faintness, flatulence, &c.

LAVENDER VINEGAR.—Put a pint of vinegar into a stone bottle, and add to it half an ounce of fresh-gathered lavender

flowers; cover closely and set it aside for a day or two; then set the jar upon hot cinders for eight or ten hours; and when cold, strain and bottle it. This will be found a refreshing perfume, and especially in close apartments or sick chambers.

LAVENDER WATER.—Mix in a quart bottle three drops of oil of lavender and one pint of rectified spirit of wine; shake them well together, and add an ounce of orange-flower water, an ounce of rose-water, four ounces of distilled water, and if agreeable three drachms of essence of musk.

LAW, PRECAUTIONS RESPECTING HAVING RECOURSE TO.—As there are few persons who are fortunate enough to pass through life without being involved in litigation, and as on many occasions a little timely reflection would obviate this evil, or a judicious line of conduct render it less pernicious, the following hints will be probably found acceptable to those who contemplate taking this step. A case is not always decided upon its merits, but frequently upon the manner in which it is put or made to appear; therefore, however just your cause may be, and however weak that of your adversary, do not on that account calculate upon a successful issue. Sometimes gaining a cause is merely a nominal benefit, and it rarely secures to the successful litigant that amount of good fortune which it promises; there are also some cases, and by no means uncommon ones, of persons gaining a cause and yet losing money by it. Before taking any very active steps, endeavour to avoid litigation by any proposal which you conceive to be equitable and which does not compromise you; or should a proposition come from the other side, it should not be hastily rejected, as is frequently the case, but be duly considered by the person interested, and advised upon by some friend on whose judgment and discretion reliance is to be placed. If litigation must of a necessity be had recourse to, great caution should be exercised in selecting a solicitor of talent and respectability; and it should be also borne in mind that, when the solicitor is so consulted, a full and fair statement should be made of the circumstances of the case; neither keeping back what may be deemed the weak points on the one side, nor exaggerating those on the other. Sometimes a case is undertaken by an attorney, on the understanding that if unsuccessful the client shall be at no expense, the attorney of course calculating upon reimbursing himself out of the award, in the event of his client proving victorious. While the case is in progress, the client should avoid interviews and correspondence with his solicitor as much as possible, unless he is in a position to pay the enormous fees, which repeated consultations and letters entail. Before commencing an action, consider well whether you will be able to pay the expenses which are likely to be incurred; and in order to estimate this position the more justly, imagine yourself to be unsuccessful; the overweening confidence of litigants in the justice of their cause, and the consequent miscalculation of

their responsibility, has been the means of much ruin and unhappiness. But there are other important considerations in connection with going to law irrespective of the cost. As a rule the progress of legal contests is slow and tedious, dragging its course on for weeks and months, and sometimes for years; during the whole of that time, the hopes and fears occasioned by suspense, literally absorb a person's thoughts, thereby materially interfering with his avocations, and marring the success of his business plans or professional pursuits. In his hours of leisure, also, which should be devoted to recreation and domestic happiness, the same all-engrossing theme intrudes itself, and serves to embitter the hitherto enjoyable moments of his life. Finally, speaking in a general sense, it is advisable that no person should voluntarily go to law, but if drawn into it against his will, he should endeavour to free himself as speedily as possible.

LAWN.—In horticulture, that breadth of mown turf formed in front of, and extending in different directions from, the garden-front of the house. When first constructed, after the ground has been dug over as level as may be, it must be rolled, the hollows filled up, and this process repeated until a level surface of earth is obtained. It must then be slightly pointed over with a fork, and the turf laid or the grass seed sown. If seed be employed, the following is a good selection, and in the requisite proportions for an acre: *Festuca duriuscula*, four and a half pounds; *Avena flavescens*, one pound and a half; *Lolium perenne*, thirty pounds; *Poa nemoralis*, three pounds; *P. sempervivens*, two pounds; *P. trivialis*, two pounds and a half; *Trifolium repens*, eleven pounds; and *T. minus*, three pounds. The best season for sowing is during moist weather in March. In dry weather, all lawns should be watered, and if a little guano and muriate of lime be dissolved in the water, it will keep the surface gently moist even in dry weather. An excellent kind of grass for improving a lawn, is *Crested Dogstail*; it may be sown in March. Busb-harrow the lawn, in order to stir the soil gently for the seed, which should be sown broadcast when the ground is damp, passing a garden roller over it when the ground becomes sufficiently dry. Much of the fine appearance of lawns depends upon the regularity in mowing; if they are left too long in the spring before the operation is commenced, or if allowed to grow strong during summer, and more especially if not closely mown at the latest period in autumn, the growth becomes coarse, the smoothness of the surface is destroyed, and alternately the whole becomes patchy and unsightly. All lawns, unless the subsoil be a porous alluvial gravel, should be thoroughly drained at their formation, and a drain should be carried along the bottom of each terrace slope, so that the turf may be at all times comfortable and dry to walk upon. Although worms are rather annoying at particular seasons, by casting up the material they have removed during their tunnelling operations, still it should be borne in mind that by these very perforations, air is admitted

to the roots of plants, upon which so much of their health depends.

LAXATIVES.—This is a term applied to that class of drugs which produce a moderate action on the bowels, lying, as it were, between the extremes of an aperient and a cathartic. Laxatives are especially serviceable in cases of convalescence, when the system having been exhausted by strong remedies to cure the disease, requires keeping in judicious restraint by a medium course, till restored nature can act for itself. Though cathartics in reduced doses, and by combination with less potent substances, may be, and often are, employed as laxatives, there are so many drugs which are properly so, that the practice is a very censurable one. The best laxatives are derived from the vegetable kingdom, and consist of the pulp of the cassia, manna, lenitive electuary, prunes, rhubarb, gray powder, olive oil, phosphate of soda, nearly all the preparations of potass, and most ripe fruits; besides these, blue pill, aloes, and scammony, may be included, though the two latter always require to be given in combination, or else they will act as purgatives, and probably defeat the object for which the medicine was taken. The dose of cassia pulp and lenitive electuary is from two to four drachms, according to the constitution; of the manna, from one to two drachms. Prunes should be simmered in a little water and sugar; and if eaten hot, a few teaspoonfuls will be sufficient; but when cold, a larger quantity will be requisite. The dose of powdered rhubarb is from half a drachm to a drachm in a little water. Gray powder, from eight to ten grains. Of olive or almond oil, the dose is ordinarily an ounce, taken in a little mint or camphor water. Phosphate of soda, being devoid of taste, may be administered in the heverage, and if so taken, and warm, or simply in hot water, about two or three drachms will suffice; from that quantity to half an ounce constitutes the laxative dose of all the other salts. Blue pill may either be taken alone, in doses varying from four to six grains, or in combination, the same as aloes and scammony, as shown in the following three forms of laxative pills. No. 1—Take of

Blue pill	15 grains,
Compound rhubarb pill	15 grains.

Mix and divide into six pills, of which take one, once or twice a day. No. 2—Take of

Aloes	20 grains,
Castile soap	12 grains,
Ginger powder	8 grains.

Mix and divide into six pills; take one eight and morning. No. 3—Take of

Scammony	1 scruple,
Gray powder	18 grains,

Castile soap, enough to make into a mass, which divide into six pills; one to be taken daily.

Besides these, the common rhubarb pill, and the pillacocia, or colocynth pill, sold in the shops, may be used as laxatives, though, as a generally useful and convenient laxative, the formula No. 3 will be found most beneficial.

LAYERING.—A mode of propagating trees and plants. In general, the operation of layering in trees and shrubs is commenced before the ascent of the sap, or delayed till the sap is fully up; and hence the two seasons are early in spring, or at midsummer. With plants in the artificial atmosphere of a hothouse, the case is different, and the operation may be performed at such times as the plant is found to be in a fit condition, irrespective of the above seasons. The manipulations of this mode of propagation are exceedingly simple; the following will explain the routine. In ordinary cases of nursery layering, the plant to be propagated is called the stool. Stools are cultivated only for the production of shoots proper for layering, hence they are cut close down to facilitate the operation. The stool occupies the centre, the young healthy wood is reserved, and the slender and unhealthy is cut out. The ground around being loosened up, shoot after shoot is gently drawn down from the stool; a notch, tongue, or other incision is made on its under side, and from six to ten inches from its base the earth is opened, and the layer is fitted into the soil, of a depth according to its nature and strength. It is then secured in the desired position by double and single hooked pegs, as seen

in the engraving, or by a shoot of flexible nature, such as willow, which is twisted in the middle, and the two ends thrust into the ground, one on each side of the layer; the soil is laid over it, the point of the shoot is cut off, leaving one or two eyes above the ground surface. The incision, for the most part, consists in simply entering the knife below a



bud, and cutting to the depth already pointed out, drawing the knife upwards, and leaving what is called a tongue; sometimes a simple notch is cut out; in the former case, a piece of tile, thin stone, or chip of wood is inserted, to keep the tongue open, or the wound from collapsing. Some plants will root freely without any incision being made; others, if only a small portion of the bark be pared off; some if they are slightly twisted or fractured; while others will not, unless a ring of bark be taken off, or tightly bound round with a piece of wire. The effects of all these are the same, namely, the obstruction offered to the descending sap, and the consequent formation of granulous matter, and the after protrusion of roots. In the case of trees which are too strong or too brittle to bend down, the process of plashing, or of elevating the soil in pots, boxes, or raised hanks, must be resorted to. The time required for layers becoming suffi-

ciently rooted to be fit for separation from the stool, depends on a variety of circumstances. Some trees and a few shrubs require two years; roses, and the majority of similar shrubs, of their present year's wood, operated upon when about half ripened, will be fit for removal the same autumn; if laid in spring, or the winter preceding, they will be ready about the same time; while herbaceous and soft-wooded plants will produce their roots in a few days or weeks; and the same will occur with many plants under artificial excitement. *Layering herbaceous plants* is had recourse to in the case of rare or valuable plants, as being attended with much less risk of losing the plant than if the more ordinary process of making the cuttings were adopted; it is also practised with a view of obtaining stronger plants in a less space of time. The process is commenced when the shoots are of sufficient length and have attained some degree of consistency, which state usually occurs about the time the plant is coming into flower. The annexed figure



shows the principle in the case of a double sweet william. The lower leaves of the best formed shoots being cut off, the budding-knife is inserted below a joint or bud, is passed through half the branch, and continued about three-quarters of an inch upwards, the bending of which upward keeps the cut open, while the shoot is pegged down and covered with soil somewhat sandier than that on which the plants are growing. The form of the peg used in laying is as previously represented; but often, and more conveniently, a small twig of willow is used cut to the length of six or eight inches, and bent over, with both ends thrust into the ground, to keep the layer in its proper place. And in some extreme cases, where a shoot is sent from a distance, or accidentally separated from the original plant, the root end is placed in a phial of water, and the top end laid in a pot, the intention being to supply it with moisture while the rooting is taking place.

LEADEN TREE.—This beautiful and interesting object may be produced as follows: Put half an ounce of sugar of lead, in powder, into a clean wine decanter or large phial, filled with water; add ten drops of nitric acid or a little vinegar, and shake the mixture well; then take a piece of zinc about the size of a hazel-nut, tie it to a string, which is made to pass through the cork that fits the phial; round the piece of zinc twist once or twice a piece of fine brass or copper wire, and let the end of the wire depend from it in either of the forms seen in the engraving.



Place the zinc and wire thus prepared, so that it shall hang as near as possible in the centre of the bottle, and that no part shall touch either the top, bottom, or sides of it. Let the whole remain undisturbed for a short time, having previously fitted in the cork with the zinc attached. The metal will very soon be covered with the lead, which it precipitates from the solution, and this will continue to take place until the whole is precipitated on the zinc, which will then assume the form of a tree or bush, with leaves and branches of a metallic lustre.

LEAD, IN METALLURGY.—This metal is very malleable and ductile, but soft and unelastic. Though readily oxydised by exposure to the air, the oxydisation does not proceed far; hence its durability for roofing, and other external purposes. Perfectly pure water, put into a leaden vessel, and exposed to the air, soon oxydises and corrodes it; but river and spring water exert no such solvent power. Hence it is, that leaden cisterns are used with impunity for the preservation of common water, and that the crust which forms upon the metal prevents all further action. As this crust partly consists of carbonate of lead, which is very poisonous, great care should be taken to prevent its diffusion through the water upon any occasion, as by scraping or cleaning the cistern. Lead is not a proper metal to be used in any vessel for containing food in a liquid or moist state, for it is so readily acted upon by the vegetable and mineral acids as to be highly prejudicial to health, and even fatal to life itself. Rain water collected from the roofs of houses in leaden gutters, and coming down through leaden pipes, is apt to imbibe a poisonous salt, and to render the water unfit for consumption. Lead can be plated with tin, and as the latter metal is much less deleterious than the former, this method may be advantageously resorted to in pipes. To effect this, heated lead is rubbed with melted tin, using at the same time turpentine, or some other resinous matter, as a

flux. The lead being thus covered with tin any quantity of the latter metal will readily adhere to the surface of the cylinder of lead, which is then ready to be drawn into pipes.

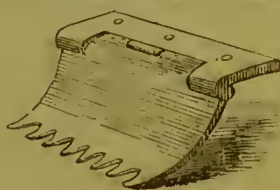
LEAD, IN MEDICINE.—Next to mercury, there is no metal that has more preparations, or varieties of form, than lead; and none that probably enters so largely into the arts and sciences, and as a pigment giving us almost all the colours and their shades, from black to white, though in medicine the preparations of this mineral may be said to resolve themselves into two, or rather one, for the second is only a solution of the other. They are, however, distinctive in their appearance and character, though not in their qualities, the one being called sugar of lead, or the *acetate*, and the other liquor of lead, or the solution of the acetate, a compound often referred to in these articles as extract of lead, or the *liquor plumbi*.

The use of lead as an internal remedy is now almost exclusively confined to that class of disease known as hæmorrhage, such as spitting or vomiting of blood, under which heads a full account of the dose and mode of employment will be found. As an external remedy, lead is employed extensively as a lotion or ointment to subdue inflammatory action, and also as a collyrium in ophthalmia and other affections of the eye. Lead is chiefly beneficial from its cooling and astringent properties, and would be a valuable remedial agent if it could always be preserved in the system in its acetate form; but as this is almost impossible, its employment is attended with great risk—hence its expulsion, except in this form, from the pharmacopœia. Lead exerts on the system a disease nearly analogous to palsy, and this as readily from handling as from taking it into the system—a disease which painters are particularly subject to, and from whence it has been called both the painters' palsy and the painters' colic. The best antidote for lead when taken in excess, is vinegar, which converts it into an acetate, and Epsom salts to carry it off.—See Poisons.

LEAF IMPRESSIONS.—To take perfect impressions of the leaves of plants, the following process should be adopted: Hold oiled paper in the smoke of a lamp, or of pitch, until it becomes coated with the smoke; for this paper apply the leaf of which you wish the impression taken, having previously warmed it between your hands, to render it pliable. Place the lower surface of the leaf upon the blackened surface of the oiled paper, in order that the numerous veins which are so prominent on this side may receive from the paper a portion of the smoke. Lay a paper over the leaf, and then press it gently upon the smoked paper, either with the fingers, or, better still, with a small roller, covered with woollen cloth, or some soft material, so that every part of the leaf may come in contact with the smoke on the oiled paper: a coating of smoke will thus adhere to the leaf. Then remove the leaf carefully, and place the blackened surface on a sheet of clean white paper, covering the leaf with a clean slip of paper, and pressing upon it with the fingers on the roller as before.

Thus may be obtained the impression of a leaf, showing its perfect outlines and veins, more accurately than in the most careful drawing.

LEAVES, AGRICULTURAL VALUE OF.—The leaves of trees which fall during autumn and winter, form an excellent manure for living plants, and will always repay a careful and systematic collection. A machine known as the leaf collector considerably economizes time and labour when used in parks, woods, and other extensive enclosures. This apparatus consists of a large cylindrical tub, about five feet in diameter and seven feet long, which swings upon an axle, and is open at top, in order to receive the leaves as they are collected. The collectors are hollow iron scoops, or scrapers attached to bars, extending across the machine from two iron hoops, which work round the cylindrical receiver, and, as they revolve, scrape the ground, collect the leaves together, lift them up, and turn them into the tub. The collectors or scoops, as seen in the engraving, are made of several distinct pieces, set in rows with



springs behind each, by which any part of the scraper is enabled to give way should it come in contact with a stone or

other obstacle. The hoops carrying the scrapers are lowered and adjusted to meet the ground by having their pivots supported in a lever attached to the carriage, upon which it is adjusted by means of a circular rack and pinion. The scrapers revolve as the carriage moves forward, by means of a span wheel upon the nave of one of the carriage wheels, which works into a cog-wheel upon the axis of the scraper frame.

LEASE.—A conveyance of premises or lands for a specified term of years, in consideration of rent or other recompense, with definite conditions as to alterations, repairs, payment of rent, forfeiture, &c. Being an instrument of importance, it should always be drawn by a respectable attorney, whose duty it is to see that all the conditions in the interest of the lessee are fulfilled. He should also carefully examine the covenants of the lease; or if he take an underlease, he should ascertain the covenants of the original lease; otherwise, when too late, the lessee may find himself so restricted, that the premises may be wholly useless for his purpose, and he may be involved in perpetual difficulties and litigation; for instance, he may find himself restricted from making alterations convenient and necessary for his trade; he may find himself compelled to re-build or pay rent in case of fire, or discover that he is subject to forfeiture of his lease, or other penalty, if he should underlet or assign his interest. The covenants on the lessor's part are usually the granting of legal enjoyment of the premises to the lessee; the saving him harmless from all

other claimants to title; and also forfeiture of insurance. The tenant undertakes on his part to pay the rent and taxes (save such of the latter as may be exempted), to keep the premises in suitable repair, and to deliver up possession when the term is expired. If a lessee do not deliver up possession at the expiration of his term, he is of course liable for rent; and if he be allowed to retain possession without any new contract, he is deemed a tenant by sufferance, at the same rent as he had been previously paying; and on the landlord's acceptance of any sum for rent accruing after the termination of the lease, the tenant may hold the premises from year to year, till half a year's notice has been given by him. A lease may be assigned over for the whole or part of the term; the last, however, is properly only an under-lease; the difference between the two is, that in an assignment the assignee is bound to observe the covenants in the original lease, but an under-lessee is tenant to the lessor only, and has nothing to do with the terms of the original lease, further than his possession may be affected by the observance of them by the lessor. A tenant who covenants to keep a house in repair, is not answerable for its natural decay, but is bound to keep it wind and water-tight, so that it does not decay for want of cover. A lessee who covenants to pay rent, and keep the tenement in repair, is liable to pay the rent, although the premises may be burned down. If a landlord covenants to make certain repairs, and neglect to do so, the tenant may do it, and withhold so much of the rent; but it is advisable that notice thereof should be given by the tenant to the landlord, in the presence of a witness, prior to commencing the repairs. Copyholders may not grant a lease for longer than one year, unless by custom or permission of the original holder; and the lease of a steward of a manor does not hold good, unless he is duly invested with a power for that purpose. Married women cannot grant leases, unless the power is specially reserved them by their marriage settlement; but husbands seised in right of their wives, may grant leases for twenty-one years. If a wife is executrix, the husband and wife have the power of leasing, as in the ordinary case of husband and wife. Married women cannot (except by special custom) take leases; if husband and wife accept a lease, she may, after his death, accept or reject it, and is not bound by the covenants, though she continue a tenant. Leases may be forfeited by alienation, or when the tenant grants to another a greater estate in the premises than he has himself. If the lessee commit felony, or any act that in a court of record amounts to a forfeiture of his estate; by waste, as pulling down houses, suffering buildings to decay for want of necessary repairs, tearing away floors or doors, or destroying the timber, rabbits in a warren, fish, &c.; by the tenant ceasing to reside on the premises; by non-payment of rent;—in all these cases of forfeiture the landlord has a power of re-entry. In purchasing a lease, it is advisable that a portion of the purchase-money should be

kept back for a certain time, in order to discharge any outstanding claims upon the property, for which the previous possessor is liable. Upon leases of freehold property, or for a long term, money may be borrowed, the sum lent, and the rate of interest chargeable, being of course regulated by the value and nature of the property. As leases are very valuable instruments, they should be preserved with the greatest care; and if the owner of a lease has not an appropriate place on his own premises to place it in, he should deposit it with his banker, or his solicitor, taking at the same time an acknowledgment that such lease is deposited with the holder for safe custody, together with an understanding that it shall be given up when demanded. The cost of drawing up a lease varies considerably, some solicitors undertaking to perform the service at a much more moderate charge than others. But although it is undoubtedly desirable to incur as little expense as possible on these occasions, it is in point of fact a secondary consideration, the most material point being that the solicitor employed is conscientious, efficient, and responsible.

LEATHER.—The prepared skin of animals. The principal object of the art of converting skin into leather is to render it strong, tough, and durable, and to prevent its destruction by putrefaction. The skins are first cleansed of hair and cuticle, and then impregnated either with vegetable tar and extract, as in the production of tanned leather, or with alum and other salts, as for tawed leather. These processes are sometimes combined, and tanned leather often undergoes the further operation of currying, or impregnating with oil. As instances of these different results—thick sole leather is tanned; white kid for gloves is tawed; the upper leather for boots and shoes is tanned and curried; and fine Turkey leather is tawed, and afterwards slightly tanned.

LEATHER CEMENT.—An adhesive material for uniting the different parts of leather, may be made as follows:—Take one pound of gutta percha, four ounces of India-rubber, two ounces of pitch, one ounce of shellac, two ounces of oil. Melt these ingredients, and stir them well together, and apply the mixture hot.

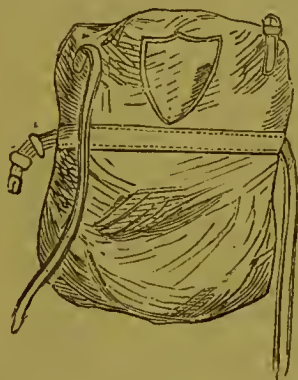
LEATHER, TO CLEAN AND PRESERVE.—A mixture for cleaning leather may be made thus:—Take of French yellow ochre, one pound; sweet oil, a dessertspoonful. Mix these well together until the oil be no longer seen; then add a pound of pipe-clay, and a quarter of a pound of starch. Mix the whole with boiling water, and when cold lay it on the leather. Leave it to dry; then rub the leather well with a cloth, and afterwards brush it briskly. For hat-cases, writing-desks, and similar articles, dissolve in warm water a small quantity of oxalic acid, and wash the articles with a sponge dipped in the solution. When dry, they will appear almost equal to new. To preserve leather from the attacks of mildew, pyroligneous acid will be found serviceable, and will also recover the leather when it has been thus injured. The acid should be passed over the

surface, after having expunged any existing spots by the application of a dry cloth. This remedy will prove of equal efficacy when applied to boots and shoes which are damaged in the same manner.

LEATHER, TO RENDER WATERPROOF.—Take of spermaceti, four parts; India rubber, cut small, one part; melt with a gentle heat, then add tallow or lard, ten parts; amber or copal varnish, five parts. Mix these ingredients thoroughly, and apply the composition to the leather with a paint brush. The India rubber should be cut into very small pieces, and allowed four or five hours to dissolve.

LEATHER, TO VARNISH.—The best varnish for leather is thin gum-water, mixed with an equal quantity of the white of egg; but it should be observed, that for book covers and other articles likely to be much handled, white of egg and water alone should be used, beaten together in equal parts.

LEATHERN WALLET.—This article, as seen in the engraving, is used in nailing wall-trees, and will be found very serviceable, in cases where the walls are so high as



to require the operator to stand on a ladder. In the figure there may be seen, besides the large pocket for the shreds and nails, two small pockets above it, for a knife and a sharpening stone. It is a great improvement to a wallet of this kind to have it kept open by three pieces of light wood, one on each side and one in the centre.

LEAK.—A defect in a vessel, by which water is admitted. The manner of stopping a leak is to put into it a plug wrapped in oakum, and well tarred; or nailing a piece of sheet lead over the spot. A leak is sometimes temporarily stopped by the primitive method of thrusting a piece of salt beef into it. The sea water being fresher than the brine contained in the meat, penetrates into its body, and causes it to swell so considerably as to bear strongly against the edges of the broken plank, and thus stop the influx of water. With regard to leakages in domestic utensils, it is always better to have them properly repaired immediately the defect is discovered, as any temporary patch-

ing-up only serves to increase the defect, and is not to be relied upon as a remedy.

LEDGER.—The ordinary ledger of commerce is well-known; a book having the same purpose and on a similar plan may be very profitably kept by private individuals as a record of their dealings and expenditure. Thus accounts might be opened with the butcher, baker, brewer, &c., which if carefully kept, would not only prevent the possibility of a mistake, but would enable the person keeping it to ascertain in a moment the state of his income and expenditure.—See BOOK-KEEPING.

LEECHES.—The leeches usually employed in medicine are brought to this country from Sweden and Poland, and though the striped kind are considered the best, if in a state of health the colour makes little difference in the quality. The leeches common in our ponds of England are equally good as those brought from the Continent, although they are somewhat depreciated. The leech, though not nearly so much used as formerly, is a very valuable remedy in all severe cases of local inflammation, for they act beneficially in a double capacity, first, as extractors of blood from the part, and secondly, by the counter-irritation produced by their bites. When applied to children, in whom the circulation on the surface is much greater than in adult life, the leech should always be placed over a bone, so that if the bite bleeds freely, it may easily be checked by pressure. Much apprehension exists about stopping the bleeding from leech bites, but this can always be effected by taking up the part in the thumb and finger and retaining the pressure over the bleeding vessel till the coagulum forms; in general a bit of lint soaked in extract of lead and laid in the part will be found to act effectively, but pressure will always do so, and it is seldom the skin is so tense in any part that it may not be grasped for a few minutes. When the leech is to be removed earlier than its own falling off, all that is necessary is to insert the edge of the nail under the mouth of the leech and detach its sucker. Leeches are often—from sickness, and the heat or impurities of the skin—reluctant to bite; if this continues after washing the part, immerse the animal for a few minutes in a little porter, let it crawl on a cloth to dry itself, when it will generally be found vicious enough to bite anywhere. In applying leeches, grip the body about the middle between the thumb and finger, and directing the head to the part desired for it to fix on, maintain a steady but not a hurtful pressure, till the arched neck and working of the rings round its head shows it has fixed; but wherever practicable, the leech-glass should be employed, or a little cone of paper may be extemporised into a substitute, through the apex of which, the leech being only able to protrude its head, is to be held over the part till it bites. Where, in spite of all precautions, the leeches will not bite, rather than sicken them by long handling, it is better to scarify the part so as to obtain a single drop of blood, which, if spread over the part or in the direction desired, and the leeches then

applied, they will all bite instantly. As they fall off, whether wanted for immediate or future use, they should be disgorged at once. To effect this, the leech should be grasped by the tail firmly with the left thumb and finger, while the right should be drawn down the body to the mouth, ejecting the blood in a stream into a plate; it is then to be put in clean water, and if wanted immediately, dropped for a moment into a little porter; in this way one leech may be made to do the service of eight or ten. Salt should never be employed for the purpose of disgorging, as it not only makes the animal sick, but excoriates its cuticle. Though it is customary to change the water in which they are kept every day, this is a duty not necessary as far as their health is concerned, as they will live as well in dirty as clean water, indeed often better, and have been kept for years in oil.

LEEK, CULTURE OF.—This well-known plant is propagated by seed, and for a bed four feet wide by eight feet in length, one ounce is requisite. The soil should be light and rich, lying on a dry sub-soil; and the situation should be open. The ground should be dug in the previous autumn or winter, ready for sowing in spring. For the principal crop, allow beds four or five feet wide. A small crop may be sown thinly with a main crop of onions, and when the latter are drawn off, the leeks will have room for full growth. When the plants are three or four inches high in May or June, weed them clean, and thin them where too crowded. Water well in dry hot weather, to bring the plants forward. The leek is much improved in size by transplanting; those designed for which, will be fit to remove when the plants are from six to ten inches high, from the month of June to the month of August. For this purpose thin out a quantity regularly from the seed-bed, either in showery weather, or after watering the ground; trim the long weak tops of the leaves and the root fibres, and plant them by dibble in rows from nine to twelve inches asunder, inserting them nearly up to the leaves, or with the neck part mostly in the ground, to whiten it a proportionate length. Press the earth to the fibres with the dibber, but leave the stem as loose as possible, and as it were standing in the centre of a hollow cylinder. Give water if the weather be dry. Those remaining in the seed-bed thin to six or eight inches distance. Keep the whole clear from weeds. In hoeing, loosen the earth about the plants to promote their vigorous growth. The main crops of leeks will have attained a mature useful size in September, October, and November, and continue in perfection all winter and the following spring. When frost is apprehended, a portion may be taken up and laid by in sand. The late-sown crop will continue till May, without running to stalk. To save the seed, transplant some of the best full plants in February or the beginning of March, into a sunny situation, or in a row near a south fence. They will shoot in summer in single tall seed-stalks. Support them as necessary with stakes, and they will produce ripe seed in September.

Cut the ripe heads with part of the stalk to each; tie two or three together, and hang them up under cover, to dry and harden the seed thoroughly, when it may be rubbed out, cleaned, and put by for future service.

LEEK MILK.—Wash a large handful of leeks, cut them small and boil them in a gallon of milk till it becomes as thick as cream; then strain it: a small basinful of this twice a day will be found efficacious in cases of coughs and colds.

LEEK SOUP.—Put the liquor in which a leg of mutton has been boiled into a stew-pan, with a liberal admixture of pea-shells; simmer gently for a quarter of an hour, strain off the liquor, throw away the pea-shells, and return the liquor to the stew-pan; then add two leeks, chopped fine, to every quart of liquor, with pepper and salt to taste; simmer gently for an hour, then mix some oatmeal quite smooth, with a little of the soup, set it over a slow fire to simmer again, taking care that it does not burn. When done, pour into a tureen and serve hot.

LEG, BROKEN.—The leg, under its general denomination, consists of two parts—the thigh and the leg proper, and is consequently composed of three bones; but leaving the upper portion or the thigh to be considered under its proper head, these remarks will be confined to the two bones constituting the leg from the knee to the ankle. The two bones entering into the formation of this member are the *tibia* and *fibula*; the first, the largest and innermost, so called from a rude resemblance to a shepherd's pipe; and the other, outermost and smallest, from the fibula or buckle of the garter usually fastened over it. Of these bones the outer, as most exposed and the weakest, is by much the more frequently broken, though it frequently happens that the same accident fractures both bones. The tibia, on the other hand, is much less frequently injured by itself, as the force that has been sufficient to fracture the larger, generally involves the smaller bone in the injury. Fracture of the bones of the leg, like that of other long bones, is either transverse or oblique; in the former case there is seldom any diminution in the length of the limb; but in the latter the fractures are most frequently attended with shortening of the leg. Fractures most generally occur about the middle of both bones, or at the lower third of their length, and are detected by a change in the shape and direction of the limb, pain, incapacity of walking or standing on the member, with mobility at the fractured part, and a distinct crepitus or grating sound when the leg is moved. Fractures of the leg, like those in other parts of the body, are of two kinds, those in which one or both bones are broken without any injury to the skin or muscles, and called *simple fracture*; and that where, in addition to the fracture, the skin and flesh are more or less lacerated, contused, and injured, which is known as *compound fracture*. In the treatment of fracture of the leg, the first duty is to place the ends of the broken bones in exact and natural position, apply a long

narrow pad the length of the limb on the inner and the outer side of the leg, and outside of each adjust the splints, the short one on the inner, and the long splint on the outer side of the member; both being retained in their position by a series of tapes, as explained in the article ARM, BROKEN, and by a strap above, which secures the long splint to the waist, and another to the foot below. Some surgeons are in the habit of enveloping the limb in a roller bandage before applying the splints, but as this prevents the leg from being examined, and may injuriously bind and confine the limb, the practice has no benefit to justify it. The time necessary to effect a perfect union of the bones, depends upon the age of the patient, the general state of his health, and the severity of the accident that caused the fracture; though in ordinary cases, the requisite time is from ten to fifteen weeks. Where only one bone has been broken, much less time will be requisite to effect a reñion. After the removal of the splints, the limb must be strengthened by cold salt water bathing, and frequent friction with anodyne embrocations.

LEG REST.—A contrivance bearing this

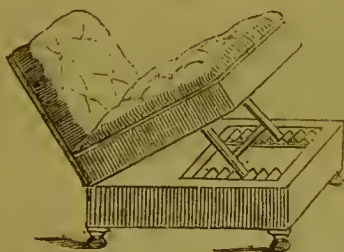
Fig. 1.



name is used in cases of gout or any complaint of the legs that requires them to be kept up in a certain position. The simplest of these, and one which may be easily constructed, is shown in *fig. 1*, which consists merely of two pieces of board at right angles to each other, one of

them being stuffed and covered, or covered with cloth only. *Fig. 2* is a more complete article, being made of mahogany, well

Fig. 2.



stuffed, and so constructed as to be capable of being raised to any desired angle by a rack.


LEGACY.—A bequest, or gift of money, goods, or chattels, by will or testament. The bequest of a legacy confers only a contingent property on the legatee, which does not become complete till the assent of the executor or administrator with the will an-

nounced, as the case may be, has been given. But before such assent, the bequest is transmissible to the personal representative of the legatee, and will pass by his will. The assent of executor or administrator, however, cannot be refused, except so far as this, that he is not bound to admit that there is any property due to the legatee till the debts of the deceased are first paid. If executors omit to pay legacies at the expiration of one year after the death of the testator, the legatee will be entitled to interest from that period. But no action can be brought for the nonpayment of a money legacy; the Court of Chancery being the proper jurisdiction for redress. Generally, an executor cannot be compelled to pay legacies until after the expiration of twelve months from the testator's decease; and not even then, unless the assets should be realized and the debts paid and provided for; but, as the rule is only for the several convenience of executors, if it should appear that all the debts of the testator are paid, the executor may be compelled to pay legacies before the twelve months have expired. In case of a deficiency of assets to pay the debts, all the general legacies must abate proportionally; but a specific legacy of a piece of plate, a horse, or the like, is not to abate, unless there be not sufficient without it. And, if the legatees have been paid, they are afterwards bound to refund a rateable part, in case debts come in amounting to more than the residue after the legacies are paid. If a legatee die in the lifetime of the testator, the legacy falls into the residue of the personal estate; but if the bequest is so clearly worded as to show that the testator intended that it should go to the children or representative of the legatee, in case of his death in the testator's lifetime, the case will not fall into the residue. If a contingent legacy be left to any one, as when or if he attain the age of twenty-one, and if he die before that time, it is a lapsed legacy. But a legacy to be paid when he attains the age of twenty-one is a vested legacy; and if the legatee die, his representative shall receive it at the time it would have become payable had the legatee lived. The reason of this distinction is, that the insertion of the words "*to be paid*" has the effect of immediately vesting the legacy, and the period mentioned is not a condition of payment, but the completion of the time when the legatee should be put in complete possession. General conditions imposed on legatees not to marry are void: but conditions, which restrain marriage within a reasonable time or to particular persons are good, because the liberty of marriage is not taken away, but a qualification imposed, which may be expedient: so a condition by a husband, that his wife shall be entitled to a legacy he has left her only so long as she shall continue his widow, is binding. Legacies bequeathed to married women ought, in general, to be paid to their husbands; but the executor, with the consent of the wife, may withhold the payment of such legacies till the husband consents to a suitable provision or settlement on the


wife. An inaccurate description or addition of a legatee, correctly named, will not destroy the effect of a legacy given to him by nomination. So, also, if the testator mistake the name of the thing bequeathed, having no other object to which the term can be applied, the wrong description of the bequest will not defeat the legacy. In leaving two separate legacies of the same amount to the same person, it is proper to express whether the second legacy be an addition to, or in lieu of the first legacy. Unless the testator has otherwise directed, the residuary legatee is entitled, not only to what remains after the payment of debts and legacies, but also to whatever may fall into the residue after the date and making of the will. No legacy can be recovered in any court beyond twenty years next after a present right to receive it accrued to some person capable of giving a discharge or release for the same, unless some principal or interest has been paid thereon, or an acknowledgment in writing signed by the party liable to pay, or his agent, and then only within twenty years after such payments or acknowledgments; and the recovery of interest is limited to the last six years. Legacies to witnesses of a will are void.

*The duties on legacies and on succession to real property, are as follows:—*Of the value of £20 or upwards, out of personal estate, or charged upon real estate, &c., and upon every share of residue. To a child or parent, or any lineal descendant or ancestor of the deceased, £1 per cent.; to a brother or sister, or their descendants, £3 per cent.; to an uncle or aunt, or their descendants, £5 per cent.; to a great uncle or great aunt, or their descendants, £6 per cent.; to any other relation, or any stranger in blood, £10 per cent. Legacy to husband or wife exempt.


LEMON BISCUITS.—To two pounds of flour, add three-quarters of a pound of moist sugar, and twenty drops of essence of lemon. Have ready three-quarters of a pound of lard, melted, and four eggs, well beaten; mix the lard and eggs together, and stir into the flour, which will form a paste; roll out and divide into biscuits, and bake in a moderately heated oven.

 Flour, 2lbs.; sugar, $\frac{1}{2}$ lb.; essence of lemon, 20 drops; lard, $\frac{1}{2}$ lb.; eggs, 4.

LEMON BRANDY.—Pare two dozen lemons, and steep the peels in a gallon of brandy. Squeeze the lemons on two pounds of powdered loaf sugar, and add six quarts of water. On the following day mingle the ingredients together, and pour in three pints of boiling milk; let the mixture remain for two days, then strain it off and bottle.


 Lemons, 24; brandy, 1 gallon; sugar, 2lb.; water, 6 quarts; milk, 3 pints.

LEMON BUNS.—Take of flour, one pound; bi-carbonate of soda, three drachms; muriatic acid, three drachms; butter, four ounces; loaf sugar, four ounces; one egg; essence of lemon, six or eight drops. Make into twenty buns and bake in a quick oven for a quarter of an hour.


 Flour, 1lb.; bi-carbonate of soda, 3

drachms; muriatic acid, 3 drachms; butter, 4ozs.; sugar, 4ozs.; egg, 1; essence of lemon, 6 or 8 drops.


LEMON CAKE.—Beat up the whites of ten eggs with a tablespoonful of orange-flower water; add a pound of sifted sugar and the rind of a lemon grated. When these ingredients have been well mixed, add the juice of half a lemon, and the yolks of ten eggs, beaten smooth. Stir in three-quarters of a pound of flour, put the mixture into a buttered pan, and bake the cake for an hour.

 Eggs, 10; orange-flower water, 1 tablespoonful; sugar, 1lb.; lemon, rind of 1, juice of half of 1; flour, $\frac{1}{2}$ lb.


LEMON CHEESECAKES.—Pare two lemons, boil the rinds till they are tender, and pound them thoroughly in a mortar. Then beat up together a quarter of a pound of butter, a quarter of a pound of loaf sugar, the juice of one lemon, the yolks of four eggs, and the whites of two; beat the eggs well by themselves before they are mixed with the other ingredients; with a very thin paste line the bottom of the patty-pans, and fill them rather more than half full; bake in a moderate oven.

 Lemons, rinds of 2, juice of 1; butter, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; eggs, 4 yolks, 2 whites.


LEMON CORDIAL.—To six ounces of dried lemon-peel add one gallon of proof spirit and three-quarters of a pint of water. Draw off by a gentle heat, sweeten with a little sugar, and bottle for use.

 Dried lemon-peel, 6ozs.; proof spirit, 1 gallon; water, $\frac{3}{4}$ -pint; sugar to sweeten.

LEMON CREAM.—To the peel of one large lemon, thinly pared, add the juice of two lemons, half a pint of water; the whites of four eggs and the yolk of one beaten well, and half a pound of loaf sugar; stir the mixture over a slow fire till it is of the consistence of cream: strain it, pour it into glasses, and serve cold.

 Lemon, rind of 1, juice of 2; water, $\frac{1}{2}$ -pint; eggs, 4 whites, 1 yolk; sugar, $\frac{1}{2}$ lb.


LEMON CUSTARD.—Beat the yolks of eight eggs till they are as white as milk; add a pint of boiling water, the rinds of two lemons grated, the juice of one, and sugar to sweeten. Stir this over the fire till it thickens: then add a wineglassful of white wine and a tablespoonful of brandy. Give the whole one seal, and turn them into cups or glasses, to remain till cold, when serve.

 Eggs, 8 yolks; water (boiling), 1 pint; lemons, rinds of 2, juice of 1; sugar to sweeten; white wine, 1 wineglassful; brandy, 1 tablespoonful.


LEMON DROPS.—Express the juice from three lemons and strain it thoroughly; mix with it a pound of refined sugar, sifted through a lawn sieve; beat these ingredients together for an hour; then deposit the mixture, in the form of drops, upon fine writing paper, and dry them before the fire.

 Lemons, juice of 3; sugar, 1lb.

LEMON DUMPLINGS.—Take the juice and the rind of a lemon, and a slice of bread, grate the two latter very fine, and add a quarter of a pound of suet, chopped very small, a quarter of a pound of moist sugar, and two eggs; mix all well together, put the mass into teacups, tie them over with cloths, and boil them.


 Lemon, 1; bread, 1 slice; suet, $\frac{1}{4}$ lb.; sugar, $\frac{1}{4}$ lb.; eggs, 2.

LEMON JELLY.—Dissolve an ounce of isinglass in a pint of water, then add a pound of loaf sugar, and the juice and rind of two lemons; boil for ten minutes; then strain it into a mould.

 Isinglass, 1oz.; water, 1 pint; sugar, 1 lb.; lemons, 2.

LEMON JUICE.—In order to keep this article ready for use, the best plan is to buy the fruit when it is cheap, and lay it by for two or three days in a cool place. Squeeze the juice into a basin, and strain it through muslin, so as not to allow any of the pulp or pips to pass. Having prepared some small phials, perfectly dry, fill them with the juice so near the top as only to admit half a teaspoonful of sweet oil, which put in each. Cork the bottles securely, and set them upright in a cool place. When the lemon-juce is required for use, open only such a sized bottle as can be used in two or three days. Remove the oil, by dipping into the phial a skewer with some clean cotton wound round it, to which the oil will be attracted; and when all of it is removed, the juice will be as fresh and pure as when first bottled.

LEMON LOZENGES.—To a quarter of an ounce of gum arabic add ten or twelve drops of the essential oil of lemons; dissolve in half a pint of water, and add a pound and three-quarters of loaf sugar. Work all together into a stiff paste on a marble slab, which should be dusted with starch powder to prevent adhesion. Roll the mass out into a thin sheet, and stamp it out for lozenges.


 Gum arabic, 4oz.; essential oil of lemons, 10 or 12 drops; water, $\frac{1}{2}$ pint; sugar, $\frac{1}{2}$ lb.

LEMON MARMALADE.—Squeeze the lemons, boil the peels in water till soft; then take out the pith and pound the remainder in a mortar till quite fine, mixing with them a little of the juice; pass it all, with the remainder of the juice, through a sieve into a preserving pan. To every pound of the pulp add three-quarters of a pound of loaf sugar, boil it for half an hour or more, till it sets, when cold, into a jelly; it may then be poured into jelly-pots for future use.

LEMON MINCE PIE.—Squeeze a large lemon, boil the outside of it till very tender, and then reduce it to a mass. Add to it three large apples chopped, four ounces of suet, half a pound of washed currants, and four ounces of sugar. Put in the juice of a lemon and candied fruits, as for other pies. Make a short crust, and fill and cover the patty pans in the ordinary way. Bake in a moderately heated oven.

LEMON PEEL CANDIED.—Cut the fruit lengthwise, remove all the pulp and inner skin; then put the peel into salt and water, and let it remain for six days; at the end of this time boil the peels in spring water, until they are soft, and place them in a sieve to drain; make a thin syrup with a pound of sugar-candy added to a quart of water; boil the peels in this for half an hour, or until they appear clear; make a thick syrup with sugar and as much water as will melt it; put the peel into this, and boil it over a slow fire until the syrup candies in the pan; then take the peel out, dust it with powdered loaf sugar, and dry before a slow fire, or in a comparatively cool oven.


LEMON PEEL SYRUP.—Take three ounces of fresh lemon-peel, and infuse them for twelve hours in a pint and a half of boiling water, in a closely covered vessel; then strain the liquor: let it stand to settle; and having poured it off, clear from the sediment, dissolve in it two pounds of double-refined loaf sugar, and reduce it to a syrup with a gentle heat.

 Lemon-peel, 3ozs.; water, $\frac{1}{2}$ pint; sugar, 2lbs.

LEMON POSSET.—Steep the rind of a lemon thinly pared in a pint of sweet white wine, two hours before the mixture is required; add to it the juice of a lemon, and sugar to taste; put it in a bowl with a quart of milk or cream, and whisk it in one direction, until it becomes very thick. Serve in glasses.

LEMON PRESERVE.—Choose clear fresh lemons, wipe them perfectly clean, and cut upon the rind any devices of stars, rings, flowers, &c., being careful not to cut lower than the white pith. Put them into a saucepan with cold water, and boil them till partially tender; then turn them into cold water: when they are cold, drain them and wipe them dry; then put them in boiling syrup, and let them boil for three or four minutes; afterwards empty the whole together into an earthen pan, to cool. The next day, and for three or four consecutive days, repeat the boiling in rather stronger syrup each day; lastly, put them into appropriate jars or glasses, pour syrup over sufficient to cover them, and then tie a piece of bladder over each.

LEMON PUDDING.—Beat the yolks of four eggs thoroughly, add four ounces of white sugar, the rind of a lemon being rubbed with some lumps of it, so as to take the essence; then peel and beat it into a paste, with the juice of a large lemon, and mix all together with four ounces of warmed butter. Line a shallow dish with a crust, and put the above mixture into it; bake in a moderately heated oven.

 Eggs, 4 yolks; sugar, 4ozs.; lemon, 1; butter, 4ozs.; paste, sufficient.

LEMON PUDDING, WITH APPLE.—Boil three or four small apples into a pulp, with a very little water; add the peel of one lemon thinly pared, the juice of half a one, the yolks of four eggs, a tablespoonful of brandy, and two ounces of butter melted; sweeten to the taste. Line a dish with

puff paste, and fill with the mixturo; then bake it.

🍰 Apples (small), 3 or 4; water, sufficient; lemon, rind of 1, juice of half of 1; eggs, 4 yolks; brandy, 1 tablespoonful; butter, 2ozs.; sugar, to sweeten.

LEMON PUDDING, WITH BREAD.—Mix together three ounces of bread grated, three ounces of loaf sugar; boil three-quarters of a pint of milk, and pour over it; when cold, add three eggs well beaten, and the juice of one lemon. Line a dish with paste, put in the above ingredients, and bake.

🍰 Bread, 3ozs.; loaf sugar, 3ozs.; butter, 3ozs.; lemon, 1; milk, $\frac{3}{4}$ -pint; eggs, 3; paste, sufficient.

LEMON PUFFS.—Beat and sift a pound and a quarter of double refined sugar, grate the rinds of two large lemons, and mix thoroughly with the sugar. Then beat the whites of three eggs separately, add them to the sugar and lemon-peel, and beat the whole together for an hour. Make the mixture into the form of puffs, put them on paper laid on tin plates, and bake them in a moderate oven.

🍰 Sugar, 1 $\frac{1}{2}$ lb.; lemons, 2 rinds; eggs, 3 whites.

LEMON RICE.—Boil sufficient rice in milk till it is soft, and sweeten to taste with white sugar; put it into a basin or an earthenware blanchange-mould, and leave it till it is cold. Peel a lemon thickly; cut the peel into shreds of about half or three-quarters of an inch in length; put them into a little water; boil them up, and throw the water away, lest it should be bitter; then pour a teacupful of fresh water upon them; squeeze and strain the juice of a lemon, add it with white sugar to the water and shreds, and let it stew gently at the fire for two hours; when cold, it will be a syrup. Having turned out the jellied rice into a dish, pour the syrup gradually over the rice, taking care to distribute the shreds of peel equally over the whole, and serve.

LEMON SAUCE.—Cut thin slices of lemon into very small dice, and put them in melted butter; give it one boil, and serve it with boiled fowls or other appropriate dishes.

LEMON SPONGE.—Dissolve half an ounce of isinglass in a little boiling water, add to it the juice of eight lemons, and sugar to taste; whisk the whole together until it becomes a sponge, then wet the mould, and put the mixture in; when set, turn it out.

LEMON THYME.—A herb cultivated in the kitchen garden. It is capable of increase by cuttings, and also from seed; but, being a low creeping plant, it is usually propagated by the division of the roots. These should be planted a foot apart in a poor dry soil. For winter use, the plants should be cut over when just coming into flower, tied up in small bundles, and suspended from the roof of a warm kitchen, so as to dry rapidly without losing their green colour.

LEMON, USES AND PROPERTIES OF.—In addition to the various uses to which

the lemon is put for culinary purposes, it also fulfils a number of offices in a medicinal capacity. The juice of the lemon has been found an efficient agent in checking the ravages of scurvy; it has also been known to cure the gout, and complaints of a similar tendency, when all other remedies have failed; and taken occasionally in small quantities, it acts as a corrective where the stomach is disordered. The peel of the lemon is also employed in medicine, and forms a valuable addition to bitter tinctures and infusions. The inner or white spongy part of the peel should be rejected, and the outer part of the peel only taken. This should be hung up to dry in a warm dark situation, and when dried, kept in a close tin box until required for use.

LEMON-WATER ICE.—Take lemon-juice and water, of each half a pint; strong syrup, one pint; the rinds of three lemons grated, and with lump sugar added to the juice; mix the whole; strain after letting it stand for an hour, and freeze. Beat up with a little sugar the whites of two or three eggs, and, as the ice is beginning to set, work this in with a spatula, which process will facilitate its consistence, and improve its taste.

LEMON WHEY.—Pour into boiling milk as much lemon-juice as will make a small quantity quite clear; dilute it with hot water to an agreeably sharp acid, and sweeten to taste.

LEMON WINE.—Express the juice from six lemons, steep the rinds in the juice, and put in a quart of brandy. Let it stand for three days in an earthen vessel closely stopped; then add the juice of six more lemons, and mix with it two quarts of spring water, and as much sugar as will sweeten the whole. Boil the water, lemon, and sugar together, and let it stand till it becomes cool; then add a quart of white wine, and the other lemon-juice and brandy; mix them together, and strain it through a flannel bag into a cask. Let it stand three months, and then bottle it off. Cork the bottles well; place them in a cool situation, and the wine will be fit to drink in a month or six weeks.

🍰 Lemons, 12; brandy, 1 quart; water, 2 quarts; sugar, to sweeten; white wine, 1 quart.

LEMONADE.—This beverage forms a very pleasant and cooling drink in summer. It should, however, be drunk in moderation, as large quantities have an enervating and depressing tendency. The ordinary lemonade may be made according to the following recipe:—1. Pare two dozen lemons as thin as possible, put the rinds of eight of the lemons into six quarts of hot water, and cover it over for three or four hours. Rub some fine sugar on the lemons, to absorb the essence, and put it into a bowl, into which squeeze the juice of the lemons. To this add a pound and a half of refined sugar, and when it is cool it is fit to drink. 2. Take four ounces of lemon-juice; half an ounce of lemon-peel, thinly pared; four ounces of white sugar; mix them with three pints of boiling water, let it stand

till cool, then strain for use. 3. Powdered sugar, four pounds; citric or tartaric acid, one ounce; essence of lemon, two drachms; mix well. Two or three tablespoonfuls of this in a glass of cold water, makes an agreeable draught of extemporaneous lemonade.

☞ 1. Lemons, rinds of 8, juice of 24; water (hot), 6 quarts; sugar, 1½ lb. 2. Lemon-juice, 4ozs.; lemon-peel, ½ oz.; sugar, 4ozs.; water (boiling), 3 pints. 3. Sugar, 4lb.; citric or tartaric acid, 1oz.; essence of lemon, 2 drachms.

LEMONADE, EFFERVESCING.—Boil two pounds of white sugar with a pint of lemon-juice, bottle, and cork. Put a tablespoonful of the syrup into a tumbler about three parts filled with cold water, add twenty grains of carbonate of soda, and drink it quickly.

LEMONADE, GINGER.—Boil twelve pounds and a half of loaf sugar for twenty minutes in ten gallons of water; clear it with the whites of six eggs. Bruise half a pound of ginger, boil it with the liquor, and then pour it upon ten lemons, pared. When perfectly cold, pour the whole into a cask with two tablespoonfuls of yeast, the lemons sliced, and half an ounce of isinglass. Bung up the cask on the following day. In three weeks it will be ready to bottle, and in another three weeks it will be fit to drink.

☞ Sugar, 12½ lbs.; water, 10 gallons; eggs, 6 whites; ginger, ½ lb.; lemons, 10; yeast, 2 tablespoonfuls; isinglass, ½ oz.

LEMONADE MILK.—Dissolve twelve ounces of loaf sugar in a quart of boiling water, add a pint of lemon-juice, and half a pint of sherry; then add a pint and a half of cold milk, stir the whole well together, and strain through a Jelly bag.

☞ Sugar, 12ozs.; water (boiling), 1 quart; lemon-juice, ½ pint; sherry, ½ pint; milk, 1½ pint.

LEMONADE, PORTABLE.—Take half an ounce of tartaric acid, three ounces of loaf sugar, and half a drachm of essence of lemon. Pound the tartaric acid and the sugar into a fine powder, in a stone or marble mortar; mix them together, and pour the essence of lemon upon them by a few drops at a time, stirring the mixture after each addition till the whole is incorporated; give the ingredients a final thorough mixing, and divide the whole into twelve equal parts, wrapping each up separately in white paper. When required for use it is only necessary to empty the powder into a tumbler full of cold water, and an excellent lemonade will be obtained.

☞ Tartaric acid, 3ozs.; loaf sugar, 3ozs.; essence of lemon, ½ drachm.

LEMONADE POWDERS.—Take half a pound of loaf sugar, one ounce of carbonate of soda, and three or four drops of the oil of lemon. Pound and mix these ingredients together in a mortar; divide the mixture into sixteen portions, and use one when a draught is required.

☞ Sugar, ½ lb.; carbonate of soda, 1oz.; oil of lemon, 3 or 4 drops.

LEMONADE PUDDING.—Make a sufficient quantity of the lemonade according to recipe No. 1 or No. 2; adding the juice of a Seville orange to every pint; when cold, soak in it thoroughly a French roll or rolls, allowing them to remain whole, and inserting into their surface blanched almonds. Pour over them liquefied currant jelly, and serve. This will be found a delicious and cooling summer dish.

LEMONADE SHRUB.—Take the juice of eight lemons, three ounces of the juice of berberies, half an ounce of white sugar, and half a pint of white wine. Mix these ingredients well together, bottle it, and dilute any quantity of it with water or milk at pleasure, when a draught is required.

☞ Lemons, juice of 8; berberry-juice, 3ozs.; sugar, ½ oz.; white wine, ½ pint.

LENITIVE ELECTUARY.—This medicine is prepared as follows:—Take of best senna leaves, in very fine powder, four ounces; pulp of prunes, one pound; pulp of caca, a quarter of a pound; pulp of tamarinds, three ounces; treacle or simple syrup, a pint and a half; essential oil of caraway, two drachms. Boil the pulps with the syrup or treacle to the thickness of honey; then add the senna, and, when the mixture is nearly cold, the oil of caraway; finally mix the whole well together. When properly prepared, this electuary is a mild and pleasant aperient, and may be used in cases of constipation. It is particularly well adapted for children, females, and delicate persons. It may be used either alone, or combined with a small portion of sulphur or cream of tartar. When united with an equal quantity of flowers of sulphur, it forms one of the best remedies for hæmorrhoids known. Employed alone, the dose is from one to three teaspoonfuls taken at bed-time. Lenitive electuary is rarely to be obtained genuine, decayed fruit and other noxious ingredients being frequently used in its composition. The best is to be procured at Apothecaries Hall.

LEPROSY.—A disease that in its ancient and Biblical signification, may be said no longer to exist; for what is modernly known by this name, although a foul and pertinacious disease, has none of those virulent and deep-tainting characters which are represented in Holy Writ as appertaining to this dreaded and life-corrupting malady. Leprosy is a disease of the skin so inveterate as to convert the cuticle into white dry plates, or thin scurfy scabs, that laying one over the other give the skin the appearance of the scales of a fish. Leprosy appears to be a severe form of scrofula, and arises from a vitiated state of the blood, and an imperfect nutrition; the remedies most serviceable are such as will correct the impure state of the fluids, promote a healthy digestion, and restore tone to the skin, such as the warm bath, mercury, iodine, sarsaparilla, tonics, mineral acids, quinine, exercise, and the flesh brush.

LETHARGY is a peculiar sluggishness of the system, attended with a heavy, drowsy sense of sleep, rather the consequence of disease than a disease itself; though for-

merly regarded as such, instead of being considered, as it truly is, a mere symptom, the consequence of some grave disease, and synonymous with coma. Lethargy is characterized by a dull apathetic state of the system; a weak, languid condition of the pulse, cold feet and swollen extremities, disinclination to motion, and a rooted repugnance to all exercise and exertion; the eyes become heavy and dull, a universal torpidity taking possession of the body, and an unconquerable drowsiness keeps the brain in a state of oppressed slumber, from which the patient is only roused to relapse into deeper forgetfulness. Lethargy, when it succeeds any attack of severe or lengthened disease, is always to be regarded as a very grave and serious symptom; and whatever may have been the cause that has induced it, must be encountered at once by energetic remedies: and of these the most important are hot water and mustard to the feet, cold lotions to the head, and ether and ammonia as restorative draughts; with, where congestion of the brain is apprehended, leeches to the temples, and a blister at the nape of the neck.

LETTER OF ATTORNEY.—See **ATTORNEY**, **LETTER OF**.

LETTER WRITING.—The art of writing a correct and appropriate letter is of so much importance in every department of life, as to render the study well worthy of being assiduously cultivated by every person. The class of letters which are of most importance are those relating to business matters. These should be clear, concise, and straightforward; and solely devoted to those subjects upon which it professes to treat, without interlarding it with any private communications or extraneous matter. It should be particularly borne in mind that dates, amounts, and other important items should be stated and written with such perspicuity as to prevent the possibility of any misunderstanding; the handwriting should be legible, and abbreviations rarely had recourse to. When a person has a business letter of great importance to write, he should previously collect his ideas, and con the subject over in his mind, so that the statements he makes shall fall into their natural order; the communication as a whole forming a clear exposition of the matter in hand. Failing to do this, the chances are that the writer will probably forget some important facts; or express himself so vaguely and incoherently as to render his communication unintelligible. There cannot be a doubt that the business letter of a man, reflects in a great measure his general aptitude for business pursuits, and is generally judged accordingly; and when it is considered what incalculable injury may be done to a person's prospects, by the unfavourable impression which an ill-worded and slovenly written letter is calculated to create amongst men of business, it shows that if a person is desirous to have his character and position properly estimated, he must himself furnish the credentials by which the judgment is arrived at. Letters of a social nature, although not so important as the foregoing,

are still not without their value; the pleasure which a well written communication affords, and the disappointment which a meagre and tame epistle occasions, are results almost sufficient in themselves to regulate the efforts of the writer when he takes up the pen. Much of the appropriateness of private letter-writing also depends upon the tone which characterizes the epistle. Thus, to a person occupying a superior position in life to the writer, or removed to a distance from him by age or other distinction, the tone adopted should be respectful and deferential. To correspondents on an equality with the writer the style may be free and chatty, just such, in fact, as though the two persons were absolutely talking with one another. The talent displayed in writing a letter about nothing, however much it may be despised, is not without its merit and good results; by the exercise of this talent persons are enabled to afford pleasure and gratification to those to whom their correspondence is addressed; while others who cannot be persuaded to write without they have some special information to impart, often cause great anxiety and disquietude to anxious friends by their neglecting to write, and gain the character of being thoughtless and unfeeling. Much mischief is done by the delay in writing letters: if a person has an unpleasant communication to make, he generally defers it from day to day, forgetting that with the lapse of time the unpleasantness will only become more intense. And he has sometimes the chagrin to find that the information which should have come from him, has already been imparted by another, much to his prejudice and loss. The answering of letters should be as soon after their receipt as is compatible; delay on such occasions is frequently attended by serious consequences, and at all times it displays an amount of ill-breeding and disrespect which no one can afford to be charged with. The style of letter-writing should be simple and unaffected, not raised on stilts and indulging in pedantic displays, which are mostly regarded as cloaks of ignorance. Repeated literary quotations, involved sentences, long-sounding words, and scraps of Latin, French, and other languages are, generally speaking, unworthy of one Englishman writing to another in his native tongue. The mechanical execution of a letter should be in keeping with its style, fairly and legibly written, without interlineations and blots, and with the letters perfectly formed, and of such a size as to render them easily distinguishable. After a letter is written it should be carefully read over, so that any existing errors may be corrected, and the punctuation supplied. When a person is writing a letter, he is more intent upon what he shall say than how he shall say it; and numberless errors, therefore, are liable to creep in, which require especial supervision. When there are a number of subjects to write upon, the writer should make a note of them, upon a piece of paper which lies before him while he is writing, so that he may take the items one after the other, and cross them off as they are attended to.

In replying to a person on a variety of subjects, the correspondent's letter should lie before the writer while he is answering the communication, and each question replied to, in the same order as it appears in the original letter. And when the answer is finished, it should be read together with the communication received, so as to ensure a full and correct reply being sent. The crossing of letters should always be avoided; it is an absurd custom, which is apt to imperil the meaning of the writer, and to cause the reader much annoyance, and a series of painful and useless efforts.

LETTERS, LEGAL IMPORTANCE OF.—As a great many important transactions are carried on chiefly through the medium of letters, they have by custom become to be regarded as legal testimony; and in disputed questions either the originals of letters or their verbatim copy, are unquestionably received as evidences of the facts to which they relate. It is essential, therefore, that copies of letters relating to important matters should always be taken; they should also be copied into a book kept expressly for that purpose, in their regular order, so that in the event of any letter being referred to, it may be done more readily, and also prove by the relative position it occupies in the book, as regards date, that it is the genuine copy of the letter sent at the time represented. The posting or delivery of letters is another important feature in correspondence, and for this purpose a book should also be kept in which the letters so posted or delivered should be entered, with the signature of the person who charged himself with the delivery attached: by this means a double clue is furnished in the event of any question arising respecting the receipt of certain communications, inasmuch as one book is found to contain the copy of the letter, and another book has the entry of its transmission under the same date. In communications of very great moment it is always better, where practicable, to send the letter by hand, with instructions to the bearer to deliver it only to the person to whom it is addressed; under this circumstance the clearest and most straightforward evidence is furnished of the delivery of the letter. The same degree of importance also attaches to letters received. These should be folded in two lengthwise, indorsed with the writer's name and address, and the date of receipt, and deposited in some place in such order that any particular letter may be referred to at a moment's notice.

LETTUCE, CULTURE OF.—Of this well-known esculent there are two principal families, the cos and the cabbage lettuce. The cos lettuce grows upright, and its leaves are of an ohlong shape; the cabbage has rounder leaves, folded together, and forming a low full head, spreading full out to the ground. Lettuce being a hardy and free growing plant, may be obtained early in the season if sowed in a warm border, and protected from the frost during the night. For early use the cabbage is the best, as in that stage it is more delicate in flavour than the other, but when both have arrived at maturity the

cos is the most succulent. The only mode of propagation is by seed, and the sowings take place from the beginning of February to the end of September; for a seed-bed four feet wide by ten feet in length a quarter of an ounce is sufficient, and will produce upwards of four hundred plants. For the main summer and autumn crops it is advisable to sow every month from February to July; and to sow distinct sorts in August and September, to produce late autumn and winter plants, of which a reserve is to stand for spring and early summer heading lettuces in the following year. The first crop sown in February should be in a slight hot-bed, and when about two inches high should be transferred to a colder bed covered with glass, and protected from frost. These may, in the beginning of April, be transplanted to the bottom of a wall having a southern exposure, where they will be protected by the projecting coping, and by the trimmings used to protect the blossoms of the trees. In default of such, plant in the warmest border the place affords, and protect by branches, or other means close at hand. The sowing should be performed broadcast, and moderately thin, each variety separate and raked in even and light, care being taken that the bed is trampled upon as little as possible. In the successive crops raised from the opening of spring till the close of summer, when the plants reach from two to four inches in growth, they should be thinned; of those removed, let a requisite number be planted out from one to fifteen inches asunder, to remain for cabbaging. Such as remain in the seed-beds may be either gathered sparingly, in progressive stages till the final reserve advance in close heading, or, as they increase in size, be planted out at the square distances specified above, especially those designed to stand till of stocky growth. In dry weather, water well at transplanting. Also weed and hoe the beds thinned, and water them if necessary. Those which are intended for winter culture should be planted out about the beginning of October, an abundant supply of the hardier varieties should be planted out at the bottoms of garden walls, on dry warm borders, and on raised banks, sloping both towards the sun and also from it. On these, in open places, lettuces often stand the winter well; and should those on the southern side be cut off by strong sunshine succeeding severe frosts, those on the opposite side may escape, as the process of thawing will take place more gradually on them; in planting lettuce to stand over winter at the bottom of walls, every aspect should be made use of; for it is often found that those set behind a north wall will succeed better than those having the protection of a south one. Besides planting at the bottom of walls for protection during winter, wherever there are pits or frames and glasses to spare for the purpose, these should in like manner be filled with young lettuce-plants, to afford a spring supply should the others fail. In every stage of growth they must be kept free from weeds, well watered, and the earth around them frequently stirred for the extirpation of

slugs and snails, which are particularly injurious; and are very prevalent in moist seasons. When the *cos* varieties have attained an advanced growth they require their leaves to be drawn together with a shred of bast matting, to render the interior blanched; care should be taken that the tying is not performed so tightly as to bruise the plants. The process of blanching prevents the formation of the bitter or acrid principle, which is very perceptible in all the varieties if allowed to remain in the ground, and conduces to their growth when the leaves expand and the flower-stalk begins to ascend. Frequently during dry seasons the plants will run to seed before the heart is perfectly blanched; to retard this it is an effectual practice, at the time of tying them up, to ent out the centre of each with a sharp knife. Lettuces thrive best in a light rich soil with a dry substratum. In a poor or tenacious one the plants never attain any considerable size, but run to seed prematurely. That soil is to be preferred which is rich rather from prior cultivation than from the immediate application of manure. It is of advantage to trench the ground; and if manure is necessarily applied at the time of insertion, it should be in a state of forward decay. *To produce seed*, some of the finest and most perfect plants of each variety that have survived the winter, or from the earliest sowing of the year, should be selected. The seed from any that have run up prematurely cannot be depended upon. All other plants must be removed from their neighbourhood, themselves being left at least a foot apart; neither is it allowable for two varieties to flower near each other, as only moulgr varieties will be obtained. Each stem is advantageously attached to a stake, as a provision against tempestuous weather. It is to be observed that the branches are to be gathered as the seed ripens upon them, and not left until the whole is ready, as some will ripen two or three weeks before others, and consequently the first and best seed will be shed and lost. The seed must be well dried previous to being beaten out and stoned. Lettuce seed is considered to be best the second year, but when three years old it will not vegetate. When lettuces are *gathered for use*, the whole plant should be pulled up by the roots; but as there would be a great chance of the earth, particularly from amongst the fibres, getting in amongst the leaves in their transit to the house, it is better to cut the roots off and bury them in the ground in which they grew. The outer leaves should be cut off, and the root part of the stem cut clear over with a sharp knife; the whole plant carefully washed and rinsed in clean cold water. Any of the tops of the leaves injured by frost in winter, or by insects or drought in summer, should be carefully cut off, and the utmost vigilance exercised, that no insects are allowed to remain attached to the leaves, and that all sandy and earthy particles be carefully washed out; the lettuce should be then set on end, the top undermost, in a clean salad-basket, to allow the water to drain completely out; and it should be understood that it requires

no further cleansing after being thus sent from the garden.

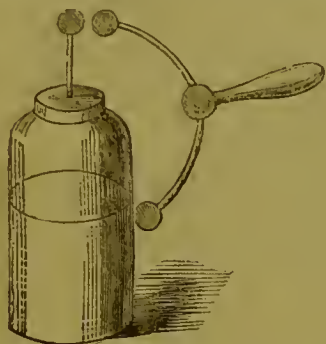
LETTUCE, DRESSED AS SALAD.—Lettuce usually forms the chief ingredient for salad, mixed with beet-root, onions, radishes, cress, &c. The *cos* lettuce is the most appropriate for this purpose, and the heart part of the lettuce is most esteemed. Before the lettuce is used, it should be freed from the water which it contains; when cut up, the pieces should not be very small; it is dressed with oil, vinegar, salt, and pepper, in the usual way.

LETTUCE, EXTRACT OF.—This is reputed to possess, though in an inferior degree, the virtues of opium, without producing the same deleterious effects; and therefore it is held that it may be safely administered where the more powerful medicine is not desirable or even admissible. This extract is obtained as follows: As soon as the flower-stems have attained a considerable size and height, but before the flowers begin to expand, a portion of the top is cut off transversely. This operation is performed when the sun has excited the plants into powerful action. The milky juice contained in the plant quickly exudes from the wound, while the heat of the sun renders it immediately so viscid, that it does not flow down in a fluid state, but concretes around the part where it issued, forming a brownish scale about the size of a sixpence. When it has acquired the proper consistence, it is removed; and as the inspissated juice closes up the extremities of the divided vessels, it is necessary to cut off another small piece of the stem; this causes the escape of the juice again, and another scale is formed. The same process is repeated as long as the plant is favourable, or the plant will yield any juice. Under so variable an atmosphere as that of Britain, a crop of this kind must necessarily be precarious, except in those places where there is generally a week or two of settled drought about the warmest period of the year, and when the cultivator has sufficient local knowledge to enable him to time the state of his plants accordingly. The following method, therefore, may be adopted under any circumstances, although the extract yielded must, as a matter of necessity, be inferior to the before-mentioned in quality. Take the stalks of the lettuce when the plant has arrived at its full growth, cut them into pieces, pound them in a mortar, and when all the juice is expressed, take away the pulp, and leave the juice to dry in the sun. The dose of the extract which is usually given, is from three to five grains.

LETTUCE, FORCED.—Having cleaned the lettuces, tie them separately with a string, and boil them. Leave them to drain and cool; then open the leaves, and lay in a forecoat between each; tie them up carefully, and stew them gently in a braise made of thin slices of bacon, a carrot, an onion, a small bunch of sweet herbs, and a little good gravy. Skim the gravy, strain it, add a glass of white wine, reduce it, and serve it quite hot.

LETTUCE, PROPERTIES OF.—The lettuce is accounted slightly anodyne, soporific, and laxative; it also possesses cooling qualities, and is altogether a wholesome food, and especially well adapted to be eaten at supper by persons whose rest is usually feverish and disturbed. On this account, however, those of an apoplectic tendency should refrain from making a hearty meal off this vegetable.

LEYDEN JAR.—This name is given to an instrument by which an accumulation of electricity is obtained. It consists of a cylindrical glass jar, coated within and



without, nearly to the top, with tin-foil. The cover consists of baked wood, and is inserted with sealing-wax, to exclude moisture and dust. A metallic rod rising two or three inches above the jar, and terminating on the top in a brass knob, is made to descend through the cover till it touches the interior coating. The outer coating being made to communicate with the ground, by holding it in the hand, the knob of the jar is presented to the prime conductor when the machine is in motion; a succession of sparks will pass between them, while at the same time, nearly an equal quantity of electricity will be passing out from the exterior coating, through the body of the person who holds it, to the ground. The jar, on being removed, is said to be charged; and if a communication is made between the two coatings by a metallic wire extending from the external one to the knob, the electric fluid which was accumulated in the positive coating, rushes, with a sudden and violent impetus, along the conductor, and passes into the negative coating; thus at once restoring an almost complete equilibrium. This sudden transfer of a large quantity of accumulated electricity is a real explosion; and it gives rise to a vivid flash of light, corresponding in intensity to the magnitude of the charge. The effect of its transmission is much greater than that of the simple ebb of the prime conductor of the machine; and it imparts a sensation, when passing through any part of the body, of a peculiar kind, which is called the electric shock. In the accompanying engraving there is seen a bent discharging rod, for establishing a direct communication between the inner and outer coatings of the jar, and

restoring the electrical equilibrium; the handle is a glass insulating one, to prevent the operator from receiving the charge of the jar. By uniting together a sufficient number of jars, we are able to accumulate an enormous quantity of electricity. For this purpose, all the interior coatings of the jars must be made to communicate by metallic rods, and a similar union must be established among the exterior coatings. When thus arranged, the whole series may be charged as if they formed but one jar, and the whole of the accumulated electricity may be transferred from one system of coatings to the other, by a general and simultaneous discharge. Such a combination of jars is called an electrical battery.

LIBEL.—Libel is defined to be a malicious defamation of another, expressed in writing or printing, or by signs, pictures, or representations, and differs from slander, which is verbal or spoken defamation. The remedy for libel is either by indictment, by action, or information: the former for the public offence, as tending to provoke the person libelled to a breach of the peace, which is the same whether the matter of the libel be true or false. In a civil action, however, a libel must appear to be false as well as scandalous. A proceeding by information is generally directed against libels on the established religion or government. Between libel or written scandal and mere verbal defamation there is an important distinction, because the former is presumed to be a more deliberate injury, and propagated in a wider and more permanent form. Printing or writing may be libellous, though the scandal be not directly charged, but obliquely and ironically. So is hanging up or burning in effigy, with intent to expose some person to ridicule and contempt, a libel. Defamatory writing, expressing only one or two letters of a name, providing the accompanying matter clearly designate an individual, is as properly a libel as if the whole name had been expressed at length. To publish a full, true, and entire account of proceedings in courts of justice upon a trial, is not in general libellous. But a party will not be justified in publishing conclusions unfavourable to another, which he draws himself from the evidence delivered in a court of justice, instead of stating the evidence itself. Nor can a correct account of the proceedings in a court of justice be published, if such account contain matter of a scandalous, blasphemous, or criminal tendency; and if it do, it is a ground for a criminal information. Also, the publication of the proceedings of a court of law, containing matter defamatory of a person who is neither party to the suit, nor present at the time of the inquiry, seems to amount to a libel. Writings reflecting on the memory of the dead are punishable, provided it appear that the author intended, by the publication, to hurt the feelings, or to bring dishonour and contempt on the relations of the deceased. It is not competent for a man charged with libel to justify, by urging that one similar to that for which he is

prosecuted was published on a former occasion, by other persons who were not prosecuted. Though malice is an essential requisite in every criminal libel, yet the act of publication is deemed presumptive evidence of malice, which the defendant will be required to disprove. The party who writes a libel dictated by another, and has discretion to understand its nature; he who originally procures it to be composed; he who actually composes it; he who prints or procures it to be printed; he who publishes or causes it to be published;—all, in short, who assist in framing or diffusing it, are implicated in the guilt of the offence.

LIBRARIES, PUBLIC.—Of the public libraries in the metropolis, open to students under certain restrictions, the first is the library of the British Museum. This library contains between six and seven hundred thousand volumes of books, comprising every department of literature, and in many languages. About one-fourth of this number are placed in shelves accessible to the reader for immediate and constant reference without any impediment. The remaining works are to be found in the catalogue of the institution, and for any of these which the reader requires, tickets have to be written, and the books are brought to him by an attendant. The authorities do not allow books to be taken out of the building, but in order to facilitate the studies of persons who are engaged upon any especial theme, and require certain works for that purpose, the books may be secured to the reader from day to day, if he intimate his desire to retain the volumes by placing in them a slip of paper bearing his name. The British Museum library is open daily from 9 till 5 in the spring, 9 till 6 in the summer, and 9 till 4 in the winter; excepting three weeks in the year, namely, the first week in January, May, and September. A ticket to admit a reader to the reading-room, and the consequent privileges attached thereto, may be readily obtained by application to the chief librarian, accompanying such application by a recommendation from a clergyman, or any person of recognised position. Another public metropolitan library is that known as Sion College, located at London Wall, in the city of London. This library contains between forty and fifty thousand volumes, and a reading-room is also attached for the convenience of students. A great advantage of this library is, that readers have the privilege of taking the books from the library, on condition of returning them within a specified time. Admission to this library is obtained by a recommendation from any city incumbent. A discretionary power is also given to the librarian to allow any qualified person to consult the library. A third library is known as Dr. Williams's, Red Cross Street, City, containing about twenty thousand volumes, chiefly of a theological nature. A fourth library is Archbishop Teuison's, Castle Street, Leicester Square, containing about four thousand volumes of general literature. Admission to be obtained through the medium of any responsible parishioner.

LIBRARY, TO FOAM.—See, under various heads, BIOGRAPHY, BOTANY, DOMESTIC ECONOMY, FARMING, GARDENING, GEOGRAPHY, GEOLOGY, GEOMETRY, HISTORY, MEDICINE, POLITICAL ECONOMY, SCIENCE, THEOLOGY, &c.

LICE.—Want of cleanliness, immoderate warmth, violent perspiration, and a corrupted state of the fluids, tend to promote the generation of this kind of vermin. The most simple remedy is the seed of parsley, reduced to fine powder, and applied to the roots of the hair; or to rub the parts affected with garlic and mustard. To clean the heads of children, take half an ounce of honey, half an ounce of sulphur, an ounce of vinegar, and two ounces of sweet oil. Mix the whole into a liniment, and rub a little of it on the head repeatedly. Lice which infest clothes may be destroyed by fumigating the articles of dress with the vapour of sulphur.

LICENCES, ANNUAL.—These have reference to a variety of professions, trades, and occupations, which cannot legally be carried on without taking out a licence annually, and the neglecting to do so is visited with a penalty more or less heavy, according to the nature of the interests involved. Licences are issued at Somerset House by the commissioners of the police, or by local agents appointed to various districts. Licensed persons are to paint on the outside of the front of their premises, in letters at least one inch long, their names and the word "Licensed," adding thereto the words necessary to express the purpose, trade, or business for which such licence has been granted. The following list comprises the various licences annually granted:—

	£	s.	d.
Appraiser or conveyancer	2	0	0
Attorney, London, Edinburgh, and Dublin	9	0	0
Attorney, elsewhere	6	0	0
(Half only for the first three years)			
Auctioneer	10	0	0
Bauker	30	0	0
Beer, seller of only, not brewers	3	6	1½
Beer retailers (publicans) whose premises are rated under £20 per annum (England and Ireland)	1	2	0½
At £20 or upwards	3	6	1½
Beer, retailer of, cider, and perry, to be drunk on the premises (England only)	3	6	1½
Not to be drunk on the premises	1	2	0½
Beer, retailer of, cider, or perry, only in Scotland, whose premises are rated under £10 per annum	2	10	0
At £10 per annum or upwards	4	4	0
Brewers of table beer only, not exceeding twenty barrels	0	10	6
Brewers of strong beer, not exceeding twenty barrels	0	10	6
Brewers for sale by retail, not to be consumed on the premises	5	10	3
Brewers of beer for sale who use sugar in brewing, an additional licence of	1	0	0

	£	s.	d.
Chemist, or any other trade requiring the use of a still, in England	0	10	0
Scotland and Ireland	0	10	6
Cider and perry only, retailer of	1	2	0½
Coffee, tea, cocoa-nuts, chocolate, and pepper	0	11	6½
Curacy, to hold a perpetual	3	10	0
For non-residence	1	0	0
Foreign liqueurs, dealers for retailing	2	2	0
Game, licensed to sell (granted by a magistrate)	2	0	0
Hackney carriage, licence to keep in London	1	0	0
Hawker and pedler on foot	4	0	0
„ and for each horse, &c., used	4	0	0
„ in Ireland on foot	2	2	0
„ ditto for each horse used	2	2	0
Maltster, making not exceeding fifty quarters	0	7	10½
Malt roaster	20	0	0
Malt, roasted, dealer in	10	0	0
Marriage, special	5	0	0
„ not special	0	10	0
Medicine vendor, London	2	0	0
„ „ any other corporate town	0	10	0
„ „ elsewhere	0	5	0
Papermaker	4	4	0
Passage vessels, on board which liquors or tobacco are sold	1	1	0
Pawnbroker, London	15	0	0
„ elsewhere	7	10	0
Plate dealers, selling above 20z. gold, and 300z. silver	5	15	0
„ „ under the above weight	2	6	0
Playing-card or dice makers	0	5	0
Postmasters keeping one horse or one carriage	7	10	0
Postmasters (Ireland)	2	2	0
Soapmaker	4	4	0
Spirits — distiller, rectifier, or dealer, not retailer	10	10	0
Spirits, retailers of, whose premises are rated under £10 per annum (England and Ireland)	2	4	1
Spirits and beer, retailers of, whose premises are rated under £10 per annum (Scotland)	4	4	0
Spirits, retailer of, in Ireland, being duly licensed to sell coffee, tea, &c., whose premises are rated under £25 per annum	9	18	5½
Stage carriage, licence to run in Great Britain	3	3	0
Stage carriage, supplementary licence	0	1	0
Stage and hackney carriage driver, conductor, or waterman (London)	0	5	0
Still, makers of, Scotland and Ireland	0	10	6
Sweets retail (United Kingdom)	1	2	0½
Tobacco and snuff, manufacturers of, not exceeding 20,000lbs.	5	5	0
Exceeding 20,000lbs., and not exceeding 49,000lbs.	10	10	0
Tobacco and snuff, dealers in	0	5	3
Vinegar makers	5	5	0

	£	s.	d.
Wine, foreign dealers in, not having licences for retailing spirits and beer	10	10	0
" " " having a licence for retailing beer, but not for retailing spirits	4	8	2½
" " " having licences to retail beer and spirits	2	4	1

LIEN.—In law, a right which one person has to detain the property of another on account of labour expended on that property, or for the general balance of an account due from the owner. The general opinion appears to be, that the right of lien extends to every trade and profession exercised for the benefit and advantage of the community. Attorneys and solicitors have a lien for their costs on the papers of their clients; bankers, upon all securities in the way of trade; brokers, factors, and agents, on the property of their principals in possession, or even in the hands of purchasers; masters of vessels, on their cargoes for wages, or necessary repairs during the voyage; carriers have a lien for the carriage-price; innkeepers, on the goods and property of their guests for their food and lodging, and on their horses for their keeping and stabling; insurance-brokers have a lien for the general balance of their account on the policies effected by them for their principals; and among others, millers, packers, wharfingers, dyers, coachmakers, calico-printers, and others, have all a lien on the goods respectively confided to them in the way of business. But as the right of lien is admitted for the benefit of trade, it is confined in its operations to trade only. Therefore no lien lies for the pasture of cattle, or the keep of the dog; or where there has been a special agreement to pay a certain sum for workmanship, in which case the owner of the goods on which the labour has been bestowed can only be made personally liable. Under the following circumstances the right of lien cannot be exercised:—
1. If the possession of the property has been obtained wrongfully, or by misrepresentation. 2. If it has been intrusted solely on the personal credit of the owner of the lien, or delivered by an authorized servant or agent. 3. And lastly, no lien can be acquired over property delivered by a bankrupt, or one in contemplation of insolvency. A right of lien gives no general right to sell goods, except where the detention of goods is creative of expense, when the lien is saleable.

LIFE BOAT.—Sec BOAT.

LIFE-PRESERVER.—A number of contrivances have been devised for the preservation of life from shipwreck, or from drowning under any circumstances. In all life-preservers the simplicity of construction, and the ready mode of adjustment, are the chief recommendations. An excellent and cheap life-preserver for persons proceeding to sea, bathing in dangerous places, or learning to swim, may be thus made:—Take a yard and three-quarters of strong jean, double, and divide it into nine compart-

ments. Let there be a space of two inches after each third compartment. Fill the compartment with very fine cuttings of cork, which may be made by cutting up old corks, or purchased at the cork-cutter's. Work eyelet holes at the bottom of each compartment, to let the water drain out. Attach a neck-band and waist strings of stout book-web, and sew them on strong. The life-preserver will then be complete.—See CORK WAISTCOAT, FIRE ESCAPE, &c.

LIGHTNING.—The injury frequently occasioned both to person and property by this destructive element, renders it highly essential to observe certain precautions by which the evil consequences ordinarily occurring may be prevented. Houses and other buildings may be protected from the injurious effects of lightning by the adoption of a conductor. This is simply a rod of copper or iron, which is elevated above the top of the structure, and runs down its side to the ground; the electric fluid is by this means attracted towards the metal, and carried by it to the surface of the earth. If the conductor be made of iron, its pointed extremity should be gilded, to avoid rust: the rod should be of sufficient diameter, and so fixed that it shall project some feet above the highest point of the building, and sink some feet into the ground till it comes in contact with moisture. When a thunder-storm, attended with vivid flashes of lightning, is raging, any articles of bright metal lying about rooms should be removed or covered over. Within doors, the safest position is the cellar, for when a person is below the surface of the earth, the lightning must strike it before it can reach him, and will probably be expended on it. The centre of the room is the best to sit in, and this position will be improved by placing the feet on another chair. It will be safer still to lay two or three mattresses in the middle of the room, and to place chairs upon them. When a person is struck by lightning, cold water should be thrown upon him as speedily as possible. Out of doors it is safest to avoid trees, walls, iron railings, or any object by which the lightning can be attracted: if no house be near in which to take refuge, it is best to stand in the middle of a field, or in the open road until the storm has subsided.

LIGNUM VITÆ.—The popular name of a plant of the genus *judacum*. The common *lignum vitæ* is a native of the warm latitudes of America, and of several of the West India islands. It becomes a large tree, having a hard, brownish, brittle bark, and its wood firm, solid, ponderous, very resinous, and of a blackish yellow colour in the middle, and of a hot aromatic taste. It is of considerable use in medicine and the mechanical arts, being wrought into utensils, wheels, cogs, and various articles of turnery.

LILAC.—Of this hardy shrub there are many varieties: the white, red, and blue flowered; and of the Persica, also the parsley-leaved, and the sage-leaved. They may be raised from suckers, layers, cuttings, and seeds; the sowing and planting may be made during the autumn in any common soil.

LILY.—Of this plant there are many varieties. The proper time for planting and transplanting them is in autumn, when their flowers and stalks decay, which is generally in August and September, the roots being then at rest for a short space of time, though the bulbs taken up at the above season of rest may be kept out of ground, if necessary, till October or November; the white lilies, however, do not succeed if kept long out of the earth, and all the others succeed best when planted again as soon as possible. Plant them four or five inches deep, and at good distances from one another. None of the sorts require any particular culture, for they will endure all weathers; so no more is necessary than destroying weeds about their stems, and supporting the plants with sticks. They may all remain undisturbed two or three years, or longer; nor, indeed, is it proper to remove those out of bulbs of tender, for by remaining they flower stronger after the first year. It is, however, advisable to take up the bulbs entirely every three or four years. The lily may be propagated by offsets or by seeds. The roots yield offsets abundantly every year, which, when gently watered, may be taken off annually in autumn, otherwise once in two or three years. The small offsets should then be planted in beds a foot asunder, and three deep, to remain a year or two; and the large bulbs should be planted again in the borders, &c., singly. Propagation by seed is sometimes practised, but more particularly with a view of obtaining more varieties. In autumn, soon after the seed is ripe, sow it in pots or boxes of rich light earth, half an inch deep; place the pots in a sheltered situation all winter, and the plant will appear in the spring; in April remove the pots to have



only the morning sun all the summer, giving moderate waterings; in August, transplant the bulbs into nursery-beds in flat drills an inch deep, and three or four asunder; but as the bulbs will be very small, scatter the earth and the bulbs together in the drills, and cover them with earth the above depth; in August or September following, trans-

plant them into another bed, placing them eight or nine inches each way asunder, here to remain to show their first flower, then transplant them finally. *The lily-of-the-valley* requires a rather more careful culture than the ordinary sorts. Before planting, dig over and well break the ground about nine inches deep, then plant the roots, about four inches apart, all over the surface of the ground, giving them a gentle press down with the thumb and finger, and then cover them about four inches thick with the same sort of soil. On forming new plantations of this plant, select all the flowering buds from the stock of roots, and plant them by themselves. If equal quantities of each can be had, there will be equal quantities of flowers for two or three successive seasons, after which they should be all taken up, the roots divided, and replanted in the same way. At the time of replanting, it will be requisite to leave a sufficient quantity undisturbed for the purpose of lifting, for forcing during the winter months. For forcing, pot them in thirty-two-sized pots, filled to within three and a half inches of the rim with rich loam, upon which the roots are closely placed, and then covered about two inches in thickness with equal parts of leaf mould and sand; they are then well watered, so as to settle the mould about the roots; and afterwards placed on a shelf, near the glass, in a moist stove, or forcing-house, the temperature of which may range from sixty-five to seventy degrees, taking care that the soil does not become dry. When they are so far advanced that the plants show their heads of flowers, remove them into a warm greenhouse, still placing them near the glass, until as they advance in growth they are withdrawn by degrees into a shaded part of the house, from whence they are removed to the drawing-room as required, their places to be immediately filled with others, which are similarly treated, and thus an uninterrupted succession will be kept up. Care and attention are requisite in lifting and selecting the plants for forcing; they require a minute examination to distinguish those that will flower from those that will not, the only difference being that the buds of the former are more round and short than those of the latter.

LIME.—The chemical uses of lime to vegetation are very considerable, and highly important. In its direct action as a food or constituent of plants, it must be regarded as an essential ingredient. The chemical action of the lime on the soil is very remarkable; mixing with the heavy adhesive clays, it renders them more flexible, less liable to be injuriously acted upon by the sun, and much more readily permeable by the gases and vapours of the atmosphere. The quantity of lime used per acre, of necessity varies with the soil and the expense with which it is procured. The heavy clay and peat soils require the largest proportions; the light lands need a much smaller quantity to produce the maximum benefit. As a general scale, twenty-five bushels per acre, mixed with earth, may be used for light soils, and never more than a hundred bushels per acre

on clays. A calm day should be chosen for spreading the lime; but should there be the least wind, the single horse carts should be so placed at the heaps as that the lime-powder which rises into the air should be blown away from the horses and men. Powdered lime is heavy; but all that can lie upon a shovel is so light in weight, that each ploughman takes a heap, and spreads the lime from it upon the ridges allotted to him. The direction in burning should have the wind a little ahead; and when a number of men take from different heaps, they should so arrange themselves along the ridges as that the cart farthest down the wind take the lead in spreading. It is proper to put a cloth over the horse's back and harness, and the men should cover their faces with crape, to avoid the cauterizing effects of the quicklime. The horses, when loosened from work, should be thoroughly wiped down and brushed, to free the hair of any lime that may have found its way into it; and should the men feel a smarting in the eyes or nose, sweet thick cream is the best emollient. Lime is usually procured in summer and autumn, as the kilns are only kept in activity in those seasons; so when it is intended to apply it in spring, it is necessary to procure it in autumn, and keep it all winter. To preserve it in a desirable state in winter, the heap of shells should be covered with a thick coating of earth, and every crevice that appears in it should be immediately filled up. The qualities of lime vary according to the localities in which it is found; and the lime of some districts is not at all suitable as a manure. Some specimens contain a very large proportion of magnesia, which absorbing carbonic acid very slowly, remains in a caustic state, to the injury of the roots of the plants, and the diminution of benefit from the carbonic acid evolved by the decomposing constituents of the soil.

LIME, MEDICAL PROPERTIES OF.—Lime is a corrosive, antacid, and depilatory. It is employed in surgery as a caustic, and in chemistry and pharmacy, to make lime-water, to render the alkalies caustic, to make several calcareous salts, abstract water from various substances, &c. *Lime-water* is made by pouring six parts of boiling water upon a quarter of a pound of fresh burnt lime. They are to be agitated together, and the vessel covered directly, and set apart for three hours; afterwards the solution is to be preserved upon the undissolved lime, in well stoppered glass bottles, and the clear fluid poured off when it is wanted for use. It is tonic, antacid, and beneficial in cases of scrofula and extreme debility. Milk disguises the flavour of lime-water without impairing its virtues. The dose is from half an ounce to half a pint, once or twice a day. The use of lime in domestic economy is very important. Lime water has been recently made to perform another office, for which it is said to be excellently adapted. It has lately been found that water saturated with lime, produces in bread the same whiteness, softness, and capacity of retaining moisture, as results from the use of alum;

while the former removes all acidity from the dough, and supplies an ingredient needed in the sustenance of the human bones, but which is deficient in the cereals. The best proportion to use is, five pounds of water, saturated with lime, to every nineteen pounds of flour. No change is required in the process of baking. The lime most effectually coagulates the gluten, and the bread weighs well.—See CHLOUDE or LIME.

LIME PLANT, CULTURE OF.—The lime is one of the citron family. It grows to about eight feet in height with a crooked trunk, and many diffused branches with prickles. It is a native of Asia, but has long been common in the West Indies, where it is



grown both for its fruit and fences. The fruit of this plant supplies an excellent juice, highly prized on long sea voyages, and efficacious in preventing the ravages of scurvy, and alleviating its attacks.

LIMITED LIABILITY.—This term has a legal reference to joint-stock companies and partnership associations. Thus it is enacted, that any seven or more persons, associated for any lawful purpose, may, by subscribing their names to a memorandum of association, and otherwise complying with the provisions of the Act in respect to registration, form themselves into an incorporated company, with or without limited liability. The names of the shareholders in limited liability companies are to be registered, together with the amount of shares for which they are liable. Every limited company is to have its name affixed outside its office of business in legible characters, and engraven on its seal; and in order to point out its constitution, the word "limited" is to form the last in the title. In the event of any limited company being wound up by the court, or voluntarily, any person who has ceased to be a holder of any share within the period of one year prior to the commencement of the winding-up, shall be deemed, for the purposes of contribution towards payment of the debts of the company, and the costs and expenses of winding up, to be an existing holder of such share

or shares, and shall have in all respects the same rights, and be subject to the same liability to creditors, as if he had not ceased to be a shareholder.

LINE FOR ANGLING.—This part of the fishing tackle is generally to be bought better than it can be home made. But if the angler still prefers to make the line himself, he should use silk and hair, rather than any other material, and plait, not twist them. A machine, fabricated especially for amateur line-makers, may be purchased at the shops; and this will be found of great assistance. The most useful line is about four yards in length. A single hair line, with a small porcupine float, is sufficient for general fishing. The plaited silk lines are best for trolling; the line should be shot, that it may sink to the desirable depth in the water; the shots should be affixed near together, within two or three inches of the bottom loop of the line. The line-maker should observe that the line is finest near the end, and stoutest at the top. As a great deal of the success in angling depends upon the manner of casting the line, the following hints in connection with this proceeding will be found of service:—When you have properly fixed the winch of the rod, and have brought your line from it through the links, fix your fly on, and let out your line about the length of the rod, or something less; take the rod in your right hand, and the fly in your left, holding by the head between your thumb and finger, with the point outwards. By observing this precaution, you will avoid hooking yourself. When you move the rod backward to cast the line, let the latter go from your left hand. Practise several throws at this length, and increase it gradually as you improve, until you are able to throw almost any moderate length with ease to within an inch of any spot you desire. Draw the fly lightly towards the shore, and watch it narrowly, so as to be able to strike instantly, but not violently, if a fish should rise at it; if you do not, you will most probably lose him, for, by your inadvertence, he quickly discovers the nature of your bait. In raising your line for the second and subsequent throws, wave your rod around your head instead of bringing it directly backwards. You should not return the line before it has gone its full length behind you, lest you whip off your fly. In order to exhibit your flies naturally to the fish, when you have thrown, raise your hand by degrees, with a slight quivering motion; and as you thus draw the bait towards you, let it go down the stream (for you must never bring your fly against it); and before it comes too near you, prepare to cast again. If you see a fish rise at a natural fly, throw your line a little above him, so that the bait may descend gently and naturally towards him: fish every yard of water likely to afford sport, and never despair of success; for sometimes it so happens that after many fruitless hours spent without a fish ever rising at your fly, you will fill your bag or basket during the last hour. The lighter your fly descends upon the water, the greater

chance you have of a rise. Use only one hook at a time till you can throw to any given distance with precision. By dint of observation and practice you may acquire such a mastery as to be able to cast your fly under banks, into holes, among bushes, &c., where the best fish are frequently found. Always fix your eye upon the spot towards which you are throwing, and you will scarcely fail after a time to cast your fly in the right place.

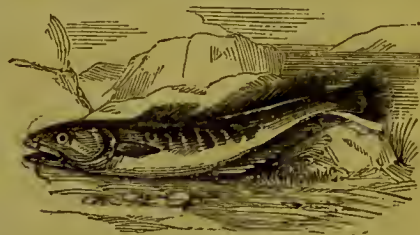
LINEN.—This well-known article of wearing apparel, and general domestic use, is made in every variety of quality, from the coarsest to the finest. It is difficult to give directions for judging of the fineness of linen, the best guide being furnished by the comparison of one quality with another, and bearing in mind the peculiar characteristics of each. One of the most striking properties of this material is, that it is a non-conductor of heat, and therefore it is better adapted for summer wear than for winter use. Yet even in this capacity it must be adopted with caution, and with delicate persons, especially, it should never be worn immediately next to the skin, the reason being that the perspiration, instead of being passed off through the fabric, as with cotton, remains on the inner surface, and by thus interrupting the free exercise of the pores, creates that cold and clammy sensation, which is as disagreeable to the feelings as it is injurious to the health. For external articles of clothing, however, linen will be found a cool and agreeable wear during the hot summer months; thus, a linen jacket, or a linen bonnet or cap, by its non-conducting properties, is enabled to resist the heat of the sun which is brought in contact with it, and to prevent its penetrating inwards to the body or the head. The cool and soothing nature of linen renders it especially well adapted for binding up wounds or applying to sores, and neither cotton nor any other material should be used when this can be obtained. For this purpose every housewife should always have a store of linen rags deposited in some accessible place, and in a fit condition to apply immediately, so that they may be used upon an emergency.

LINEN, PRESERVATION OF.—When linen is well dried, and laid by for use, the chief precaution to attend to for its preservation, is, to secure it from damp and insects. The former is effected by placing the linen in wardrobes, drawers, or boxes situated in apartments which are naturally dry, and which have fires occasionally lighted in them: the ravages of insects may be prevented by the use of a judicious mixture of aromatic shrubs and flowers, cut up and sewn in linen bags, and interspersed among the shelves and drawers. These ingredients may consist of lavender, thyme, roses, cedar-shavings, powdered sassafras, cassia lignea, &c., to which a few drops of rose water, or other strong scented perfume have been added. When linen is placed by for any length of time without being used, it should be brought forth occasionally and hung up in the open air; by this means, it is prevented from becoming

discoloured, and the creases are prevented from wearing into holes. Mildewed linen may be restored by soaping the spots while wet, covering them with fine chalk scraped to powder, and rubbing it well in. In all cases, it will be found more consistent with economy to examine and repair linen that may stand in need of it previous to sending it to the laundry. It should be borne in mind, that too frequent washing is liable to wear out linen more than ordinary use; and therefore the process should not be repeated oftener than is absolutely necessary. It will also be found an excellent plan to have every article numbered, and so arranged after washing that each may be worn in its regular turn, and accomplish its proper term of domestic use.

LINEN, TO REMOVE STAINS FROM.—*Fruit stains* may be removed by rubbing the stain on each side with yellow soap; then tying up a piece of pearl ash in it and soaking it well in hot water; the stained part should afterwards be exposed to the sun and air until removed. *Ink stains* may be removed by wetting the part with warm water, and applying salts of lemon. *Wine stains* will disappear, if the articles stained are placed in boiling milk, and suffered to boil until the stains disappear. Scouring drops for removing spots, grease &c., from linen, may be compounded from an ounce each of spirits of turpentine and essence of lemon, and applied with a camel's hair brush. The essence must be recently made, or it will leave a circle round the spot.

LING.—A salt-water fish, of which small numbers only are consumed, although it is



of agreeable flavour, and possesses nutritious qualities.

LINIMENT.—A remedy used externally as a local stimulant to relieve deep-seated inflammations when other means cannot be employed. Independently of their general efficacy, these remedies possess certain specific properties, and may be compounded as follows:—*Anodyne and discutient.* Take two drachms of scraped white soap, half a drachm of extract of henbane, and dissolve them by a gentle heat in six ounces of olive oil. To be used in portions of two or three drachms at a time, for glandular enlargements which are painful and stubborn. *Strong ammoniated.* Add one ounce of strong liquid ammonia to two ounces of olive oil; shake them well together until they are properly mixed. To be employed as a stimulant in rheumatic pains, paralytic numbness, chronic glandular enlargements

lumbago, solatia, &c. *Compound ammoniated.* Add six teaspoonfuls of oil of turpentine to the preceding liniment. To be used for the same diseases, and for chronic affections of the knee and ankle joints. *Lime and oil.* Take equal parts of common linseed oil and lime water, and shake the whole thoroughly. To be applied to burns, scalds, sun-blisters, &c. *Camphorated.* Dissolve half an ounce of camphor in two ounces of olive oil. To be used as a stimulant, soothing application, in glandular enlargements, dropsical swellings, and rheumatic pains. *Soap liniment with Spanish flies.* Take three ounces and a half of soap liniment, and half an ounce of tincture of Spanish flies; mix and shake well. To be used as a stimulant to chronic bruises, sprains, rheumatic pains, and indolent swellings. *Turpentine.* Melt two ounces and a half of resin cerate; add an ounce of oil of turpentine, and mix. To be used as a stimulant application to ulcers, burns, scalds, &c.

LINNET.—A well-known song-bird which usually builds in a thick black or white thorn hedge, or in a furze bush. Nestlings



may be taken at ten days old, about the middle of May, when the shafts of the feathers have just begun to appear. Cover them up warm, and feed every two hours, from six in the morning till six or seven in the evening, on a mixture of moistened crumb of white bread, soaked rape-seed, and hard-boiled egg. When they are able to feed themselves, give them summer rape-seed entire, but moistened with water, so that the husk may be easily disengaged. Vary the food by the addition of millet, radish, cabbage, lettuce, and plaitain-seeds, and sometimes a few melon-seeds or barberries. The more their food is varied, the less subject will they be to disease; but care must be taken not to overfeed them. A supply of summer rapeseed may always be within the bird's reach, but the other kinds of food must be given sparingly, and by turns. Birds that have liberty to range the apartment may be more freely fed than those that are wholly confined to their cages. Hemp-seed must be given sparingly, because it fattens them so much that they either die or discontinue singing. A little salt mixed with their food is very agreeable to them, and prevents many diseases. As

linnets are very fond of bathing, and of dusting their feathers with sand, they should have a bath of fresh water daily attached to their cage, and should also be supplied with a bed of fine sand, removed from time to time. A small piece of chalk should also be put into their cages, to prevent looseness, to which they are liable; and also to guard against epilepsy; the symptoms of which are silence, melancholy, and a bristling of the feathers; the bill becomes hard, the veins thick and red, the feet callous and so swollen that the bird can scarcely sit on its perch. Linnets are also subject to asthma, which may be easily detected by shortness of breath, and by the bird keeping his beak open, as if to gasp for air. This disease is generally produced by dry and heating food; and by the air of overheated rooms. The best remedy is to substitute for their customary food, bread and milk, lettuce and cucumbers, and watercresses. The song of the linnets is very lively and sweetly varied; its manners are gentle, and its disposition docile. When confined with other birds it easily adopts their song; and when taken young, it may readily be taught to modulate its voice to any sound to which it is accustomed. The male bird may be distinguished from the hen by the browner tinge of the feathers on its back; and to ascertain this more precisely, hold the bird gently in the hand and stretch out its wing; if you observe the white on three or four feathers clear and bright, and extending up to the quills, you may conclude that it is a male bird, as the white upon the hen's wings is less and fainter. The females are smaller than the males, and, when nestlings, may be distinguished by the back being more grey than brown. The male nestlings may also be known by their white collar, and by their having more white about their wings and tail.

LINSEED.—The seed of the common flax, possessing soothing and emollient properties, and employed both as an internal and external remedy. To make *linseed poultice*, obtain ground linseed free from grit. Pour a sufficient quantity of boiling water into a hot basin, and stir the meal in till the whole is of the proper consistence; beat the mass smooth, spread it evenly upon the linen lying ready to receive it, and apply it as hot as it can be borne. To make *linseed tea*, pour two quarts of boiling water upon one ounce of linseed, and two drachms of liquorice-root, sliced; in cases of stubborn coughs, a few slices of lemon may be added; let it stand in a covered jug for six hours, then strain it off, and drink as occasion demands.

LINT.—This material was formerly old linen cloth scraped, to give it a soft woolly surface; but it is now manufactured on purpose, of new material, and may be purchased of any chemist. Lint may be made on the instant by nailing the corners of a piece of old linen to a board, and scraping its surface with a knife. *Scraped lint* is made into various shapes for particular purposes. When it is twisted up into a conical and wedge-like shape, it is called a tent, and is used to dilate fistulous openings and plug

wounds, so as to promote the formation of a clot of blood, and thus arrest bleeding. When rolled into little balls, they are called boulettes, and are used for absorbing matter deposited in cavities, or blood in wounds. Another useful form is made by converting a mass of scraped lute into a long roll, and then tying it in the middle with a piece of thread; the middle is then doubled and pushed into any deep-seated wound so as to press upon the bleeding vessel, while the ends remain loose, and assist in forming a clot; or it is used in deep-seated ulcers to absorb the pus, and keep the edges apart.

LIP, AFFECTIONS OF.—The lips, or rather the lip, for it is to the lower lip that disease is generally confined, is subject to several affections, such as inflammation and enlargement, ulceration, chapping, and excoriation—all in themselves trivial and harmless—and is only subject to one, and fortunately rare, disease of any serious moment—cancer. Leaving this for the present out of consideration, all the others may be regarded as symptomatic of the state of the stomach, or else are caused by direct irritation from contact with jagged teeth. The most prevalent form of sore lips is that of deep cracks or fissures, that on the first stretch of the cuticle bleed; in persons of a scorbutic habit, instead of cracking, the skin peels off in scales, leaving a raw, irritable, and painful abrasion, aggravated by heat or moisture, and which sometimes continues for weeks; both of these conditions are dependent on the state of the system, and can always be cured in a few hours, or in the worst case in two or three days, by a dose or two of aperient medicine, such as a dose of blue pill, and a spoonful of Epsom salts some hours after, repeating both for two or three times, should the obstinacy of the case require it. When inflammation and swelling of the lip takes place, as it sometimes does, from the presence of a broken tooth, keeping up a constant irritation from the sharp edge pressing on, or coming in contact with, the soft part, the spicule should be at once filed down, or else the tooth withdrawn, for while the exciting cause remains, no means will afford relief. This having been done, a cold lotion of sal-ammoniac, vinegar, and water applied by means of wetted pledgets of rag will speedily reduce the swelling, when a pill and a draught, such as has been already ordered, will ensure a permanent recovery of the part to health. The lip in all cases should be kept as dry as possible, and especially from the saliva and the tongue; and as all such cases are symptomatic of the state of the system, their own permanent cure is, as we have shown, by an aperient medicine. An excellent application is a little tallow rubbed in by the finger before going to bed, the tallow having the advantage over all other grease, in not becoming rancid. Cancer of the lip is usually characterized by a callous thickening of the cuticle and the formation of a warty excrescence; or it may begin by a painful pimple, which after once or twice being removed, degenerates into a small irritable ulcer, which discharges a

thin ichorous exudation, and rapidly affects the glands under the jaw, which become distinct and knotty; the ulcer, after remaining for a length of time in a passive, irritable state, closing over, and again breaking out, suddenly assumes an active form, and is attended with stiffness in the muscles of the jaw and darting pains, till it finally assumes all the features of this much dreaded disease; for which, though caustic and arsenic are the best remedies we possess, there is no certain cure but excision, in the same manner as for hare-lip. Though cancer of the lip is generally confined to men in mid-life, and inveterate smokers, it would appear more to depend upon some occult state of the blood than to any social habit, however objectionably pursued.

LIP SALVE.—A remedy for chapped and wounded lips, usually made as follows:—Take two ounces of oil of sweet almonds, half an ounce of white wax, and half an ounce of rose-water; set a mortar in a vessel containing boiling water, and put the wax, cut into very small pieces, into a mortar. When the wax has melted, take out the mortar, and add the oil by degrees, heating with the pestle until it is cool; then mix the rose-water with the mass. If it is desired to be coloured, rub up a little carmine with the oil before mixing it with the wax.

LIQUEURS.—These are made in two ways, either by distillation or infusion; but there are very few liqueurs which are not nearly as good when made by infusion as they would be by the other more tedious process; it is only when the flavouring substance has a deteriorated flavour in the form of essential oil that distillation is necessary. As liqueurs are generally sold at a high price, and can thus be as easily manufactured at home, the latter mode of obtaining them in preference to the former is a matter of considerable importance.—See CURACOA, LOVAGE, MARASCHINO NOYAU, RATAFIA, &c.

LIQUORICE, CULTURE OF.—This is a hardy perennial plant, a native of the South of Europe. It is propagated by cuttings of the roots. On account of the depth to which the root strikes, when the plant has room to flourish, the soil should have a good staple of mould, about three feet deep. Taking the small horizontal roots of established plants, cut them into sections six inches long; having traced out rows a yard asunder, plant the sets along each row, at distances of eighteen inches, covering them entirely with mould. During the first year, a light crop of lettuces or onions may be cultivated between the rows. During the summer, keep the plot clear from weeds; and when the subordinate crop comes off, hoe and dress the ground. At the close of autumn, or as a winter dressing, fork or dig between the rows, to stir and refresh the surface; and cut down the decayed stems. After three or four years' growth, the main roots will be of a mature size, and fit for consumption. In the course of the following winter, begin to dig them up, opening a trench close to the first row as deep as the

roots; then, with the spade, turn out all the roots close to the bottom; so proceed from trench to trench, and prepare the ground for some other crop.

LIQUORICE, USES AND PROPERTIES OF.—The extract of this root, known as "Spanish juice," is used chiefly as a demulcent remedy in coughs and irritation of the throat, and in irritations of the stomach and bowels. It has the advantage over many other pectoral medicines of being slightly laxative and at the same time harmless to the stomach. Many persons take it largely, and find it useful in heart-burn. The extract is also employed to cover the taste of nauseous drugs, and is added to demulcent drinks generally.

LITHOGRAPHY.—The art of taking fac-similes of drawings, printing, or writing on stone. The drawing is made on a peculiar kind of stone suitable for the purpose; a pencil of chalk is also used, or ink specially prepared, or a camel-hair pencil. A weak solution of nitrous acid is then poured over the stone, which unites with and neutralizes the alkali or soap contained in the chalk, and renders it insoluble in water. After this, the usual course is to float a solution of gum over the whole face of the stone, and when this is removed, if a sponge and water be applied to its surface, the drawing is found to be no longer removable. In this state the work is ready for the printer, who obtains impressions by the following process:—Having thrown with the ends of his fingers a few drops of water on the stone, and spread them with a sponge, so as to damp the whole surface equally, the printer finds that the water has been imbibed by the stone only on those parts not occupied by the drawing, which, being greasy, repels the water, and remains dry. A roller, properly prepared with printing ink, is now passed over the whole stone, which will not even be soiled where it is wet, from the antipathy of oil and water. But the parts occupied by the drawing, being dry and greasy, have an affinity for the printing ink, which therefore passes from the roller and attaches itself to the drawing. Damped paper is then put over it, and the whole being passed through a press, the printing ink is transferred from the stone to the paper, and this constitutes the impression. By repeating in this manner the operations of damping the stone and rolling in the drawing, an almost unlimited number of impressions may be obtained. The modes of lithography are various, but the illustration given, will explain the principle of them all. The art, in whichever way pursued, requires great delicacy and dexterity. In drawing on the stone, the slightest mark of the hand will fasten on the surface, and appear in the impression. The execution of the impression in an equally clear and dark manner, is evidently a matter of difficult accomplishment.

LIVER, DISEASES OF.—All affections of this organ are divided into two classes, *acute* and *chronic*; of the latter, there are many forms and varieties; of the former,

only one disease, which is called *inflammation of the liver*, or *hepatitis*, which is known by the symptoms of general fever, great tension and pain in the right side and under the ribs, extending across the abdomen, a full, quick, and often bounding pulse, pains in the head, between the shoulders and right arm, nausea, vomiting, and a coated tongue. Besides these symptoms, there is difficulty of breathing and pain in lying on the left side, the secretions are suppressed, and the water a deep yellow.

Treatment.—In this disease the most active measures against inflammation should be resorted to at once; and where the patient is young, bleeding adopted to the extent of twelve or sixteen ounces; where the irritation of the stomach is great, an emetic of twenty grains of ipecacuanha given, and followed by two pills composed of five grains of calomel and six grains of compound colocynth pill, divided into two; concluding in an hour or two after, by half an ounce of Epsom salts or a black draught; bearing in mind that the more immediately and the more effectively the bowels can be acted on, the more sure and expeditiously will the disease be abated. If after the adoption of these remedies the pain continues, and the pulse remains full and hard, and other symptoms indicate the unsubdued nature of the disease, rather than return to bleeding, the patient should be put in a hot bath for five minutes, and the following mixture and pills given every two and four hours till perspiration ensues, and the gums and mouth are rendered tender, each being suspended as the effect is produced. Take of

Nitrate of potass (salt-petre)	30 grains,
Tartar emetic	2 grains,
Camphor water	8 ounces,
Laudanum	1½ drachms.

Dissolve and mix. Two tablespoonfuls to be given every four hours. Take of

Calomel	12 grains,
Powdered kino	1 scruple,
Extract of gentian, enough to make into a mass, which divide into eight pills; one to be given every two hours.	

Sometimes in spite of all precaution the disease terminates by suppuration, or the formation of matter in the liver, and an abscess; a state known by chills and shivering, and the remission of the febrile action, in which case the matter either discharges into the bowels, or the abscess points externally, and requires to be opened. The moment this condition is expected the depleting system must be set aside, and the patient's strength supported by wine and tonics, with light food and gentle aperients.

The *chronic* form of diseased liver is, however, by far the most severe and frequent. Under this head are to be included all forms of enlargement, hypertrophy, schirrus, tubercles, abscesses, and the many modified and mixed forms of disease to which this organ is liable. But as these in general assume almost analogous symptoms, and require nearly all the

same kind of treatment, it will be more convenient for the sake of perspicuity and application to generalise the whole, and proceed from the milder form of treatment up to the more complicated; such as is only required in very severe or long standing cases. A chronic condition of the liver is usually characterised by a pale flabby countenance, sometimes assuming a yellow, and at others a greenish cast; the *adnata*, or white part of the eye, is frequently injected with yellow lines, and the face is either puffed or doughy; there is general lassitude of the body, and disinclination to all exertion; occasional headache, a clammy metallic taste in the mouth, accompanied by a loaded and white-furred tongue, an uncertain and fastidious appetite, dry chilly skin, a reduction in the secretions, and an habitual confinement of the bowels. In addition to all these, there is usually thirst, restless nights, and an almost constant sense of weight in the right side, a sense of weariness in the shoulder or arm of the same side, and a dragging sensation in the loins.

The *treatment*, in all cases of chronic affection of the liver, consists in stimulating by direct and indirect means the organ to a healthier state of action; for this purpose very many remedies have been employed, though for all useful purposes the number may be reduced to two, or at the most four; of these, the chief are mercury in one or other of its various forms, and taraxacum, or dandelion. The first of these has a specific action on the structure and internal economy of the liver, and the other a direct purifying and discharging influence upon all the fluids of the body. The assistant remedies are the saline salts, known as the tartrate of potass, which when required can be taken in taraxacum tea, the hot-bath, electricity, and sometimes a blister.

In the milder forms of liver affections a Plummer's pill, taken night and morning for three days, and then one every night for three days longer, with a wineglassful of taraxacum tea every eight hours, and a dose of senna, or a small amount of Epsom salts every third morning, to carry off the secretions, will in all probability comprise all that will be needed. Should the symptoms, however, not yield to this course, it will be advisable to substitute blue pill for the Plummer's pill, taking it in doses of two and a half grains, in the same manner as the former, and by adding to each dose of taraxacum half a small teaspoonful of the tartrate of potass—cream of tartar. In more severe cases, in addition to either the first or second of these courses, and especially where the skin is dry, rough, and chilly, the warm bath should be used twice a week, and the body well rubbed, especially over the region of the liver, while in the water, with a flesh brush; or if the skin is too sensitive to bear so rough a friction, with a towel. The bath, when possible, should be used at bed-time, and the patient, enveloped in a blanket without drying, lie down and perspire. Sometimes the induration of the liver is so complete, that such ordinary means fail to rouse its dormant

function, in which case the organ must be stimulated by the following course of treatment. Take of

Blue pill	1 scruple,
Powdered camphor	6 grains,
Ipecacuanha	2 grains,

Extract of taraxacum, enough to make the whole into a mass, which is to be divided into nine pills, one of which is to be taken every eight hours with a wineglassful of taraxacum tea; and the side over the liver, especially where the pain is most perceptible, is to be rubbed every night for a few times with a small quantity of the following ointment, first softening the cuticle by the application of a poultice or fomentation. Take of

Mercurial ointment	1 ounce,
Camphor	3 drachms,
Tartar emetic	1 scruple.

Mix. Where electricity can be procured, a few shocks passed through the side in the direction of the *duct*, will be found highly beneficial; or instead, a galvanic chain may be worn round the body. Sometimes it is necessary to apply a blister, though in general a strong *warming plaster*, in which some tartrate of antimony is blended, will be found to answer all purposes. In all cases the bowels must be acted on every third day either by senna, salts, or a black draught, and as much brisk muscular exercise taken as the patient can endure. The taraxacum tea is to be made by boiling two or three handfuls of the dandelion root, washed and cut small in a quart of water for fifteen minutes over a slow fire.

LIVER AND PARSLEY SAUCE.—Wash the liver of a fowl or rabbit, taking care that it is perfectly fresh, and boil it for five minutes in five tablespoonfuls of water; pound it in a small quantity of the liquor in which it has been boiled, and rub it through a sieve; wash about one-third the bulk of parsley leaves, put them on to boil in a little boiling water, with a teaspoonful of salt; lay it on a hair-sieve to drain, and mince it very fine; mix it with the liver; put it into a quarter of a pint of melted butter, and warm it up.

LIVER SAUCE, FOR FISH.—Boil the liver of the fish, and pound it in a mortar with a little flour; stir it into some broth, or a portion of the liquor in which the fish has been boiled; season with cayenne, and a little essence of anchovy, soy, or ketchup; a little lemon-juice may be added, or a piece of lemon cut into dice.

LIVER, TO DRESS.—See BULLOCK'S LIVER, CALF'S LIVER, &c.

LIVERY STABLES.—These are places where horses and vehicles are kept at the charge of the owner, either for a temporary interval or for a long term, at certain charges. If a person is likely to put up his horse and vehicle regularly at a livery stable, he should enter into an arrangement for the period, as a considerable reduction will be made on that account. A person should, however, in the first place, be careful in placing his horse under the charge of a

person who is likely to see that it is well fed and cared for. At livery stables, horses, gigs, broughams, &c., are let for hire, the terms varying with the style in which the equipage is supplied, and the length of time that it is required. Many persons who are compelled to use vehicles, such as medical men, find it less troublesome and expensive to make an arrangement with a livery stable keeper, by which he ensures a horse, vehicle, and driver being at his door at a certain hour every morning, without his having any trouble about it.

LOACH, sometimes called the stone-loach, from his great liking for haunts of stony places in rivers, is a dainty little fish, although, from his comparative scarcity, not much sought after; it is more used as a



bait for pike, trout, perch, and eels, than as an edible. The loach is in shape somewhat like the gudgeon, without its inclination to obesity, has a mouth with barbs or wattles like a barbel, and is marked with dark brown spots. He is caught with a gentle or a piece of worm on a No. 13 or 12 hook.

LOAN SOCIETIES.—These societies are established for granting loans to borrowers on personal security, and repayable by instalments. The mode of obtaining a loan is as follows:—The intending borrower obtains a printed form from the office of the society, and fills it in, according to the instructions given, with all the particulars relating to himself and his proposed security. The paper is then left at the society's office, and in a few days the applicant receives a communication that his application is granted or refused, as the case may be. If it be granted, he and his security have to attend at the office on a day named; and after jointly signing a promissory note, the loan, less the amount of interest, is handed over to the borrower. This loan has to be repaid generally by weekly or monthly instalments, and at the same time a small fee is paid with the amount, to defray what are termed the expenses of the society. In making application for a loan, the society lays great stress on the responsibility and respectability of the proposed security, the position of the borrower being a minor consideration; and therefore an intending borrower should exercise caution in the selection of the security which he makes, otherwise he is likely to be refused, and has also to forfeit

the fee which he has paid for inquiry. The aggregate rate of interest which a borrower pays for the accommodation of a loan, averages from fifteen to twenty per cent. per annum; and as this is a heavy charge, a person should reflect whether he is absolutely in need of this aid, before he has recourse to it, at so heavy a rate of interest. It is to be regretted that many so-called loan societies exist, which systematically defraud the public by retaining in nearly every case the inquiry fee, without once intending to grant the loan asked for. Therefore, before a borrower makes application to an office, he should ascertain by inquiry, and by exercising his judgment, that the office he selects conducts its business on just and honourable principles. In addition to these private loan societies, there are public ones, arising from an established fund, and lending money at a small rate of interest to specified classes of persons, on certain conditions. Thus there is a society which grants loans, at three or four per cent., to householders in the parishes of Westminster, Clerkenwell, &c. And there is a trust in connection with the City of London, which grants loans to necessitous tradesmen living within the boundaries, at a very low rate of interest. Many other loan societies also exist, which cannot be specified, but the particulars respecting which may be obtained by dint of inquiry, and by consulting the advertising columns of the leading newspapers.

LOBELIA.—This species of flower is much admired for its tall spikes of scarlet flowers, which continue to blow from July till the end of September, and, by skilful cultivation, assume a degree of magnificence rarely surpassed by other flowers. The



seeds should be sown as soon after they are ripe as possible, in pans or boxes filled with rich moist soil, well watered before the sowing. The seed, when sown, must either not be covered at all, or very slightly with a sprinkling of dry peat. The seed-pans should be kept out of doors in dry mild weather, but must be protected from frost

and heavy rain by a hand-glass or frame. The young plants will come up in spring, and ought to be kept moist, as dry weather is very prejudicial to their growth. They will thrive best in the open air, where only the morning sun can shine upon them. In May, or as soon as they are large enough, they may be potted off singly into small 60-sized pots, taking care that slugs do not get at them, or they will devour the whole. It will tend greatly to strengthen the plants, if they are re-potted as frequently as the roots fill the pots. They must be sheltered during winter, and re-potted in spring into the pots where they are to flower, which they will probably do in August, though some may not flower till the third year. This flower may be also propagated by cuttings taken from the stem, and potting them under a hand-glass during summer. Bushy plants are produced by stopping the centre stem after the last shifting, by which the side shoots become more vigorous and full of flower.

LOBSCOUS.—Mince, not too finely, some cold roast beef or mutton. Chop the bones, and put them into a saucepan with six potatoes peeled and sliced, with a seasoning of pepper and salt; of these make a gravy. When the potatoes are completely incorporated with the gravy, take out the bones, and put in the meat. Stew the whole together before it is served.

LOBSTER.—This well-known shell-fish begins to breed in the spring, and continues breeding during part of the summer. In some places they are caught by the hand; but they are generally taken by means of pots or traps, constructed of osier twigs, and baited with garbage; they are then attached to a cord thrown into the sea, and their stations marked by means of buoys. Lobsters are generally in their prime from the middle of October till the beginning of May.

LOBSTER BUTTER.—Pound the coral part of one or two fresh hen lobsters to the smoothest possible paste; mix with it about an equal proportion of fresh firm butter, and a moderate seasoning of mace and cayenne, with a little salt, if needed. Mix the whole thoroughly together, and set it aside in a cool larder, or place it over ice until it is sufficiently firm to form into pats. Serve it garnished with curled parsley, or with any light foliage which will contrast well with its brilliant colour. The coral may be rubbed through a fine sieve before it is put into the mortar, and will then require but little pounding. Another variety of preparation is produced by mingling equal proportions of lobster and of anchovy butter in the mortar, or one-third of the anchovy with two-thirds of lobster; and to this some of the white flesh can be added, to give a still further variety.

LOBSTER COLD, DRESSED.—Before a lobster is sent to table, take off the large claws, hold each of them firmly with the edge upwards, and, with a quick light blow from a hammer or other convenient implement, crack the shell, without disfiguring the fish. Split the tail open with a very

sharp knife, and dish the lobster in the manner shown in the engraving, either with



or without a napkin under it. When the soft part of the body is required to mix with the dressing, take it out before it is served.

LOBSTER CUTLETS.—Prepare and beat to a paste about three-quarters of a pound of the flesh of a couple of fine lobsters, one of which must be a hen lobster; add to it, when it is partially beaten, an ounce and a half of fresh butter, a saltspoonful of salt, and about two-thirds as much of mixed mace and cayenne, with a dessertspoonful of the inside coral, the whole of which should be rubbed with a wooden spoon through a hair sieve, to be in readiness for use. When all these ingredients are well blended, and beaten to the finest and smoothest paste, the mixture should be tested by the taste, and the seasoning heightened if needful; but, as the preparation is very delicate, it should not be over-spiced. Mould the mass into the form of small cutlets about the third of an inch thick, insert into each a short piece of the smallest claws, strew the coral lightly over them, so as to give them the appearance of being crumbled with it; arrange them round the dish in which they are to be sent to table; place them in a very gentle oven for eight or ten minutes only, to heat them through, or warm them in a Dutch or American oven, placed at some distance from the fire, that the brilliant colour of the coral may not be destroyed.

LOBSTER, DIETETIC PROPERTIES OF.—Lobster is esteemed a very rich and nutritious aliment for persons with strong stomachs; but for delicate persons it is a very inappropriate food, being one of the most indigestible kinds of shell-fish. To render it less injurious, the flesh should be beaten to a fibreless paste; and, to assist its digestion, it is always better to eat with it some greenmeat, as lettuce, &c. Lobsters should never be partaken of unless they are perfectly fresh, for, when in the least stale, they are apt to produce the most injurious consequences.

LOBSTER FRICASSEED.—Take the flesh from the claws and tails of two moderate sized lobsters, cut it into small scollops or dice, heat it slowly quite through in about three-quarters of a pint of hechamel sauce, and serve it when it is at the point of boiling, after having stirred briskly to it

a little lemon-juice, just as it is taken from the fire. Good shin of beef stock made without vegetables, and somewhat reduced by quick boiling, if mixed with an equal proportion of cream, and thickened with arrowroot, will answer extremely well in a general way for this dish.

LOBSTER FRITTERS.—Chop very fine the meat, with the coral part and the spawn of two large lobsters, add grated bread crumbs, and a little butter, and season with pepper and salt, and a very small quantity of chopped sweet herbs; make this into a kind of paste with yolk of egg; and having formed it into pieces about two inches in length, and an inch thick, dip them into a good thick batter, and fry.

LOBSTER PATTIES.—Prepare the lobster as in the preceding recipe, with the addition of a few oysters, and a little white wine. Roll out a puff paste a quarter of an inch thick, cut it into squares, line the requisite number of patty-pans, put upon each a bit of bread the size of half a walnut; roll out another layer of paste, of the same thickness, cut it as above; wet the edge of the bottom paste, and put on the top, pare them round to the pan, and notch them at certain distances with the back of the knife; rub them lightly with yolk of egg; bake them in a quick oven for a quarter of an hour; in the meantime heat the lobster mixture, and when the patties are done, take a thin slice off the top, then with a small knife or spoon take out the bread and the inside paste, and put in the fish.

LOBSTER PIE.—Pound the flesh of hoiled lobsters, including the coral part and the spawn, in a mortar, with pepper, salt, and nutmeg; then mix with the pounded meat melted butter, in the proportion of a quarter of a pound to a large lobster; add some very finely grated bread crumbs, and a little lemon-juice, and bake with a puff paste. As this is a very rich dish, it is generally eaten cold, and in small quantities at a time.

LOBSTER, POTTED.—This should be made with fine hen lobsters, when full of spawn; boil them thoroughly; when cold, pick out all the flesh, mince it quickly with a very sharp knife, and turn it into a mortar; strew on it a seasoning of cayenne pepper, pounded mace, grated nutmeg, and salt. Mix the whole well up with butter, in the proportion of three ounces to a large lobster, and beat it to the consistence of paste, press it down hard in preserving pots, pour clarified butter over the surface, and cover it with wetted bladder. Lobster may also be potted without pounding it, and only cut into such pieces as if prepared for sauce, minced with the spawn and soft parts, and seasoning, and pressed together as closely as possible. In packing it, place the coral and spawn in layers, so that it may have a regular and slightly appearance when cut out. If intended for store, this latter method is the best, but if for sandwiches, &c., the directions first given are the most proper to follow.

LOBSTER SALAD.—Cut up the flesh of a fine lobster into pieces, not of too small a size, together with two lettuces, washed with

the most scrupulous care, and rendered perfectly dry on a napkin; cut three hard-boiled eggs into square pieces; add eight or ten slices of beetroot, and a stem or two of mint; mix these all well together, and pour over it a dressing made as follows:—Take half a pint of best Florence oil, and three new-laid eggs, and heat them together; add two tablespoonfuls of mixed mustard, half a pint of melted butter, a pinch of cayenne pepper, some salt, and half a pint of vinegar. This mixture, put into bottles and tightly corked down, will keep for months, and may be used as occasion requires.

LOBSTER SAUCE.—Choose a lobster that is well filled with spawn; pull the flesh to pieces with a fork, and bruise it with the spawn with the back of a spoon; break the shell, and boil it in a little water to extract its colouring matter; strain it off; melt some butter very smoothly on it, with a little horseradish; after a few moments, take out the horseradish, mix the body of the lobster well with the butter; then add the flesh, and give it a boil, either with ketchup, or gravy, or butter.

LOBSTER SAUSAGES.—Chop finely the flesh of a large lobster, with two ounces of butter which has been browned with two tablespoonfuls of flour; season with cayenne pepper, pounded mace, and salt, and heat it over the fire with sufficient stock, or plain water, to form a mass, but not too liquid; when cold, shape it like small sausages; cover with bread crumbs and yolk of egg, and fry brown.

LOBSTER, STEWED.—When the lobsters are boiled, pick the meat clean from the shells, take a pint of water, a little mace, a little whole pepper, and the shells of the lobster; let them boil till all their goodness is extracted; strain off the liquor, and put it into a saucepan; place on the lobster, with a piece of butter rolled in flour, a wine-glassful of sherry and a little lemon-juice; after having hoiled, dish them, and serve them in their liquor.

LOBSTERS, TO BOIL.—Set over the fire a saucepan containing water salted in the proportion of a tablespoonful of salt to a quart of water; when the water boils, put the lobster in, and keep boiling briskly from half an hour to an hour, according to the size of the fish; then take the lobster out, wipe all scum from it, and rub the shell with a very little oil or butter, to give it a gloss.

LOBSTERS, TO CHOOSE.—As a rule, it is better to buy lobsters alive. Choose those which are heavy and lively, and full of motion, which is an index of their health and freshness. Those of middle size are the best. Always reject them when the shell is encrusted, this being an infallible sign that they are old. The hen lobster is distinguished from the male by having a broader tail, and less claws. When boiled, the tail of the lobster preserves its elasticity if fresh, but loses it as soon as it becomes stale. The heaviest lobsters are the best; and when they are light and watery, they are unfit for eating.

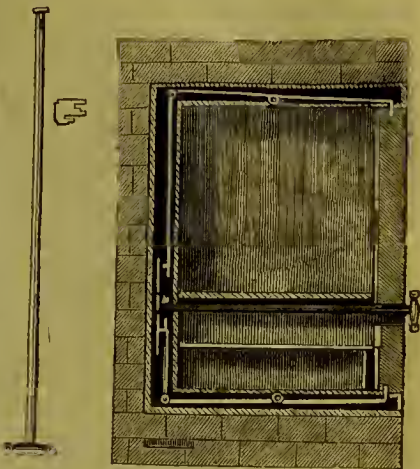
LOCKED JAW.—This formidable and fatal disease is only a local form of that mysterious condition of the nervous system, known as *tetanus*, and which receives different names according to what part of the body is thrown into convulsion or rigidity; when it affects the muscles of the head and face, it is denominated *irismus*, or locked jaw. This affection, like the general disease of which it is a part, is divided into that form which results from exposure to rain and sun, atmospheric changes, or what is known as *idiopathic*, or spontaneous, and that the far more general condition which is excited by punctures, wounds, and accidents, generally, and called *traumatic*. There are certain conditions of the system when an injury received will degenerate into a mortal evil; and others, where it is powerless to effect mischief; but unfortunately science has discovered no means to determine when either condition is present. Locked jaw is almost always the result of accident, and the length of time that takes place between the receipt of the injury and the termination of the disease, depends on the age, constitution, and strength of the patient, and the heat or coldness of the weather. The shortest case on record, lasted a quarter of an hour, though the time may be generally stated at from twelve hours to as many days.

The first symptoms are a sense of stiffness in the back of the neck, which, gradually increasing, renders difficult every motion of the head, the muscles becoming rigid, with a pain at the root of the tongue, difficulty of swallowing, with tightness about the chest, and a fixed pain behind the breast-bone, shooting out through the back; at the same time the rigidity of the muscles of the face increases, impacting the jaws so closely that nothing can possibly pass them. Sometimes the disease is entirely confined to the head, at others the spasmodic action extends over the body, showing the worst form of tetanus and hydrophobia, the patient dying in fearful suffering. As punctures and cuts from rusty nails, broken glass, or splinters, have frequently led to this painful disease, all such wounds should be immediately washed, any irritating particle lodged in the flesh removed, and a warm poultice laid over the part as a precautionary measure; and if in the foot, strict rest enjoined. As the treatment of lock-jaw is so precisely analogous to that of tetanus, the most available means of cure will be given under the one head of **TETANUS**.

LOCKS.—The amount of security which locks are capable of affording to property, should induce persons to exercise care in their selection. A lock which can be easily picked, is in fact less secure than having no lock at all, since persons are apt to place reliance on the defective implement, and to imagine they are being protected all the time they are being robbed. For doors, cupboards, and every kind of domestic receptacle, the patent locks of both Chubb and Hobbs are held in high estimation. For safe locks, that shown in the engraving, and recently invented, is proved to be of

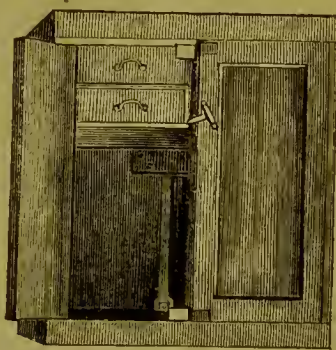
great efficacy. This lock is situate at the back, as shown in *figs. 1 and 2*. The bolts

Fig. 1.



shooting upwards and downwards, are hinged at their ends to levers, which work inside the top and bottom casing of the safe. These levers have hooks at their front ends, and when the bolts are shot by the key, these levers rock, and their hooks fasten into

Fig. 2.



the edge of the door, or into eyes inside the door. Unlocking the door relieves it from these hooks, and it is then free to open. The key of this lock is made on a new principle; that is to say, the handle and the wards form (as seen in the engraving) two distinct portions, and may be screwed on and off as required, and the portion absolutely applying to the lock, being comprised within a small compass, may be easily carried about in the pocket. The handle has a button on its end, to prevent it being drawn out of the keyhole farther than to attach the key, so that it cannot be mislaid, and is always ready at hand; while, by its being so left in, access to the lock is made still more

difficult. All locks are apt to get out of order at times, and especially when they are not treated with care. Owing to dust and other causes, they will sometimes not work easily; a little sweet oil should then be applied to them with a feather, and the key turned gently backwards and forwards several times; but if this will not amend the defect, the lock should be taken off, and thoroughly cleaned and oiled. When locks do not act freely, they should never be forcibly acted upon, as this generally injures the lock and breaks the key; the better way is to humour them, and try to move them by gentle means, and if this does not succeed, a locksmith should be consulted.

LODGERS AND LODGINGS.—Before lodgings are taken, it is essential to know that the rent and taxes of the house are paid; for the goods of a lodger are liable to distress for arrears at any time while on the premises. If lodgings are taken for a certain and specified time, no notice to quit is necessary. If the lodger, however, continues after the expiration of the term, he becomes a regular lodger, unless there is an agreement to the contrary. If he owes rent, the housekeeper can detain his goods whilst on the premises, or distrain, as a landlord may distrain the goods of a tenant. No distinction exists between lodgers and other tenants as to the payment of their rent, or the turning them out of possession; they are also similarly circumstanced, with regard to distress for rent, as householders. The rent of weekly tenants should be paid weekly, for if it is once allowed to run a quarter, the tenant cannot be forced to quit without a quarter's notice. Lodgings by the year should only be taken from a person who is either proprietor of the house, or holds possession for an unexpired term of years. *Furnished Lodgings* are usually let by the week, on payment of a fixed sum, part of which is considered as rent for the apartment, and part for the use of the furniture. In some instances an agreement is made for so much per week rent, and so much for the use of the furniture, and to place all monies received to the account of the furniture, until that part of the demand shall be satisfied; for the landlord cannot distrain for the use of his furniture. Persons renting furnished apartments frequently absent themselves, without apprising the housekeeper, perhaps with the rent in arrear. If there is probable reason to believe that the lodger be left, on the second week of such absence the householder may send for a police constable, and, in his presence, enter the lodger's apartments, and take out the property of the latter, and secure it until application is made for it. He may then enter upon the possession of the apartment; and if, after fourteen days' notice given by advertisement in the *London Gazette*, the lodger does not pay the arrears of rent, the householder may sell the property to satisfy his claim, reserving any surplus money, and such goods as it may not be necessary to sell, and must keep them ready for delivery to the lodger when he shall demand them. If a person makes a verbal agreement to

take lodgings at a future day, and declines to fulfil his agreement, the housekeeper has no remedy; but if he pay a deposit, he partly executes an agreement, and the housekeeper has a remedy against him for not occupying the lodgings according to agreement. If a landlord enter and use apartments while his tenant is in legal possession, without his consent, he forfeits his right to recover rent. If a lodger quits apartments without notice, the landlord can still recover his rent by action, although he has put a bill in the window to let them. Removing goods from furnished lodgings, with intent to steal, is a felony; unlawfully pledging is a misdemeanour. When the lodger has removed, and there are no goods whereon to make a levy, the rent becomes a debt, and can only be recovered in the County Court of the district. For *agreement of tenancy and notice to quit*, see **LANDLORD AND TENANT**.

LOGWOOD.—A medicinal agent used as an astringent. To obtain the decoction, boil an ounce and a half of bruised logwood in two pints of water until it is reduced to one pint; then add a drachm of bruised cassia, and strain. *Dose*, from one to two ounces.

LOO.—A game at cards which is subdivided into limited and unlimited loo. It is played two ways, both with five and three cards, though most commonly with five, dealt from a whole pack, either first three and then two, or by one at a time. Several persons may play together, but the greatest number can be admitted when the game is played with three cards only. After five cards have been dealt to each player, another is turned up for trump. In general, the knave of clubs, or sometimes the knave of the trump suit, as agreed upon, is the highest card, and is styled "pam;" the ace of trumps is next in value, and the rest in succession as at whist. Each player has the liberty of changing from the pack all or any of the five cards dealt him; or of throwing up his hand in order to escape being looded. Those who play their cards, either with or without changing, and do not gain a trick, are looded; as is likewise the case with all who have stood the game, when a flush or flushes occur; and each, excepting any player holding "pam" of an inferior flush, is required to deposit a stake, to be given to the person who sweeps the board, or to be divided among the winners at the ensuing deal, according to the tricks which may then be made. For instance, if every one at dealing, stakes half-a-crown, the tricks are entitled to sixpence each, and whoever is looded must put down half-a-crown, exclusive of the deal; sometimes it is settled that each person looded shall pay a sum equal to that which happens to be on the table at the time. Five cards of a suit, or four with "pam" compose a flush which sweeps the board, and yields only to a superior flush, or the elder hand. When loo is played with three cards, they are dealt by one at a time; pam is omitted, and the cards are not exchanged, nor permitted to be thrown up.

LOOKINGGLASSES, TO CLEAN.—Wash thoroughly a piece of soft sponge and remove all gritty particles from it, dip it slightly into water, squeeze it out again, and then dip it into some spirits of wine; rub it over the glass, dust it with some powder blue or whiting, sifted through muslin; remove it lightly and quickly with a cloth; then ruh it well with a clean cloth, and finish with a silk handkerchief. If the glass be a large one, clean one half at a time, otherwise the spirit of wine will dry before it can be removed. If the frames are gilt, the greatest care must be taken to prevent the spirit of wine from touching them. To clean such frames, rub them with a little dry cotton wool; this will remove all dust and dirt without injury to the gilding. If the frames are varnished, they may be rubbed with the spirit of wine, which will take out all spots, and give the varnish a superior polish.

LOTIONS.—Applications principally composed of water, used either to the skin or to the mucous surfaces, as the inside of the mouth, or of the nostrils. The variety of lotions, from plain water, upwards, is very great. Lotions may be classed as cooling, stimulating, astringent, soothing, and sedative. Of the first, water is an example, either alone, combined with spirit, from half an ounce to an ounce to the half-pint, or combined with vinegar. Water with one-third or one-half spirit of wine, applied to the skin by means of lint, which is covered to prevent evaporation, is a good example of a stimulating lotion. Very cold water, the lotion of sulphate of zinc, or of white vitriol, in the proportion of from one to ten grains to the ounce of water, form an astringent; the various preparations of opium, decoction of poppies, decoction of hemlock, &c., are soothing lotions; the prussic acid lotion a sedative one.

LOVAGE.—Cordial. Take of the fresh roots of lovage, valerian, celery, and sweet fennel, each one ounce; essential oil of caraway and savin, each two drachms; spirit of wine, one gill; proof spirit, three gallons; loaf-sugar, three pounds. Steep the roots and seeds in the spirit for fourteen days; then dissolve the oils in the spirit of wine, and add them to the unsweetened cordial drawn off from the other ingredients. Dissolve the sugar in the water for making up, and fine, if necessary, with alum.

LOVING-CUP.—A beverage made as follows:—Toast some bread, and place it in a large cup or bowl, which will hold two quarts; grate nutmeg over it, and pour on a quart of ale, and two-thirds of a bottle of sherry; sweeten this to taste, and immediately before serving add a bottle of soda water.

LOZENGE.—A hard compound of sugar and gum, which contains either simple flavouring or some medicinal agent.—See BLACK CURRANT, IPECACUANHA, PEPPERMINT, &c.

LUCIFER MATCHES, CAUTIONS RESPECTING.—The number of accidents which have occurred from lucifer matches, and the ease with which both life and property may

be destroyed by these dangerous, though useful articles, ought to induce persons to use them with caution and to guard them with care. A great many of the disasters which have been recorded as resulting from lucifer matches, have arisen through the boxes in which they are kept having been carelessly left about, within the reach of children, or even animals, as cats, rats, and mice. To prevent this, it is always better to keep them in a tin box, which should be fastened high up against the wall. When children are detected in the act of playing with lucifer matches, a sport of which they are extremely fond, they should have pointed out to them, in a clear manner, the dangers which are likely to ensue, and the accidents which have occurred to other children through playing with lucifer matches; and they should be cautioned, on pain of severe punishment, never to meddle with them again. Adults are also extremely careless with lucifer matches; sometimes, when the matches will not light readily, they throw them down one after another, and these are afterwards ignited by the friction of the foot, or any other opposing body, and smouldering perhaps for a time, eventually set light to the carpet and surrounding furniture. Carrying matches about the person is obviously attended with the greatest danger, and should never be attempted; on lighting lucifer matches, the action of the hand should be a brisk movement from the body, not towards it, for by the disregard of this simple act many accidents have occurred.

LUGGAGE, PACKING AND CARE OF.—Luggage should always be packed systematically and with order, as it will thus be found far more convenient to persons when travelling. Where there is only one package, as a trunk or portmanteau, the heaviest and most substantial articles should be placed at the bottom, and the most tender and fragile at the top. When it is not quite full, some stray articles should be placed to render it so, and to prevent the contents from shaking about. All materials that are likely to soil or stain the articles with which they come in contact, such as ink, wine, oil, &c., should be carefully corked, and placed in vessels not liable to break, and to protect them the more surely, they should be rolled in some such article as an underwaistcoat, and placed in a corner where they will ride securely. When there are more packages than one, the articles should be appropriately placed in their receptacles, according to the order in which they are likely to be wanted; so that one package need only be opened instead of three or four. In all cases, it will be found convenient and conducive to comfort, to pack such articles as are likely to be required for immediate use, into one portmanteau or bag, such as the night-dress, slippers, brushes, combs, &c., for by this means persons when arriving fatigued at the end of their journey, have those articles necessary to their comfort ready at hand, without being compelled to search one box after another, and perhaps without finding

what is wanted after all. When going on a journey, trunks, boxes, &c., should be securely corded; and portmanteaus and bags locked; the name and destination of the owner should also be prominently placed on each package, so as to prevent their being mis-sent or carried away by mistake. The owner of luggage, previous to starting on a journey, should see that it is deposited in a place of safety and protection; and having noted the place well, he should hasten there when he arrives at his journey's end, and superintend its removal; he should also prevent its being touched by irresponsible persons—railway or telegraph porters, and licensed drivers of vehicles being the most reliable. When persons are packing up their luggage, they should avoid encumbering themselves with articles which they are not likely to want, or omitting to take such things as will in all probability be required; either of these inconveniences may be avoided by a little timely thought. When the cordage, canvas, &c., used for luggage is removed, it should not be thrown away, as though it were not likely to be required again, but carefully placed aside, so that it may be ready to the hand whenever it is again wanted.—See Box, PORTMANTEAU, TRUNK, &c.

LUMBAGO.—A painful affection of the muscles of the loins and small of the back; a rheumatism, or sub-acute inflammation of the muscular fibres of the part. Lumbago, like other forms of rheumatism, is induced by exposure to cold, moisture, or wet, from over-heating the body, and while in a state of perspiration, being exposed to draughts or cold air. When of long standing, it is not unusual for the kidneys to sympathise with the external inflammation, and complicate the disease.

The symptoms of lumbago are too well known to require recapitulation; and as respects the treatment, the hot bath, either the complete or hip, is in all cases the first and most important means to adopt, being followed up by a vigorous rubbing in of the following embrocation twice a day, and the exhibition of thirty drops of the spirits of turpentine in a little gin, with a small quantity of water, upon going to bed. Take of

Camphorated oil	2 ounces,
Oil of amber and turpentine, of each	1 ounce,
Spirits of hartshorn	$\frac{1}{2}$ an ounce.

Mix, and use as an embrocation.

Where the pain is excessive, and the rest is disturbed, ten grains of Dover's powder should be taken at bed-time in a little gruel, and a bottle of hot water placed under the hollow of the back. When the acuteness of the disease is subdued it is advisable to wear a warm plaster on the loins for some short time afterwards, to keep up the heat, and guard against cold and a relapse.

LUNAR CAUSTIC.—This is efficacious in destroying warts, proud flesh, and unhealthy edges of ulcers. It is also a remedy in erysipelas, when applied in solution, in the proportion of one drachm of the salt to an ounce of water, this to be brushed

all over the inflamed part, and for an inch beyond it. The skin thus treated becomes blackened, but soon peels off, and leaves a new skin in its place. Bed sores, pencilled over with a solution of the same strength, will soon disappear when thus treated.

LUNCHEON.—The mid-day repast, known under this name, may be served in two ways. One method is to place all the things wanted on a butler's tray furnished with let-down slides, so that when placed on the table it will answer the purpose as well as though the tablecloth were laid. The other plan is to lay the tablecloth in the same manner that it is spread for dinner, with the pickle-stand and cruetts opposite each other, and water jug and tumblers, and, if in season, a vase filled with flowers in the centre of the table. The sides of the table are occupied by the requisites for each guest, namely, two plates, large and small forks and knives, and a dessertspoon, a folded napkin, with the bread placed beneath, upon the plate of each guest. If French or light wines be served, they may remain in the original bottles, and may be placed in ornamental wine vases, between the top and bottom dishes and the vase of flowers, with the corks drawn, and loosely replaced. The dishes usually served for luncheons are the remains of cold meat, neatly trimmed and garnished; cold game, hashed or plain; curries; minced meats; cold meat and fruit pies; cutlets, plainly cooked; chops; steaks; eggs; omelettes, &c. Ale and porter are generally served, and occasionally sherry, Marsala, port, or home-made wines are introduced, with biscuits and ripe fruit. As luncheon is a meal served about the time that friends and acquaintances usually drop in, a good housewife will always have something in the house ready to convert into a luncheon to meet exigencies, and, in most cases, the remains of the previous day's dinner will afford an ample supply for this purpose.

LUNCHEON CAKES.—Take a pound of flour, two drachms of muriatic acid, two drachms of carbonate of soda, three ounces of sugar, three ounces of butter, and a quarter of a pound of currants; mix these in a pint of milk, till they attain the proper consistence, and bake in a hot oven for an hour.

Flour, 1lb.; muriatic acid, 2 drachms; carbonate of soda, 2 drachms; sugar, 3ozs.; butter, 3ozs.; currants, $\frac{1}{2}$ lb.; milk, 1 pint.

LUNGS, AFFECTIONS OF.—The diseases or forms of disease to which the lungs are liable are remarkably numerous, as they sympathise with the disease of every other organ; with all the affections of the skin; besides complaints proper to themselves; and may be either acutely or chronically inflamed, enlarged, congested, tuberculated, or wasted by suppuration. Many of these forms have already, or will be yet, treated under their special heads, as consumption, phthisis, catarrh, bronchitis, some of which, though not strictly appertaining to the lungs, are so intimately connected with their

functions and the whole respiratory system as to be inseparable from those organs.

Acute inflammation of the lungs, or pneumonia, is marked by all the inflammatory and febrile symptoms developed in an aggravated degree, attended with great pain, difficulty of breathing, cough, dry skin, and thirst, with a full, strong, hard pulse, that after a time sinks to a wiry flutter.

The *treatment* is much the same as for other inflammatory diseases, bleeding, antimony, and opium being the chief and almost only remedies. But as the lungs perform one of the most, if not the most important part in the great system of life, it should be observed that whatever depleting measures are adopted, the chief force of them must be employed in the first stage; and should the inflammatory action continue, relief must be obtained by indirect evacuants, as purgatives, diaphoretics, and counter-irritants.

—See PNEUMONIA.

LUPINE.—This family of plants is generally divided into annuals, perennials, and frame evergreen shrubs; but they also



produce seed so freely that it is easiest to propagate them by that means; only the evergreens, instead of being sown in the open ground, should have the assistance of a gentle hotbed, to rear them before planting out. The white lupine was cultivated by the Romans as a legume, and is still occasionally grown in Italy and France. The seeds were formerly, and are sometimes now used as food; but more generally, the whole plant is mown and given as herbage to cattle, and sometimes the crop is ploughed down as manure.

LURCHER.—A dog of a cross-breed between the greyhound and harrier, and re-crossed with the terrier. His limbs are strong; his head less sharp than that of a greyhound; his ears are short, erect, and


half pricked; and his hair coarse and wiry. His principal forte lies in killing rabbits, as




he has a fine scent, and runs his game without giving tongue.

M.


MACAROONS, ALMOND.—Blanch and dry a pound of sweet almonds; pound them to a smooth paste, with a little white of egg, then whisk to a firm solid froth the whites of seven eggs; mix with them a pound and a half of the finest sugar; add these ingredients by degrees to the almonds, whisk the whole well up together, and drop the mixture upon wafer paper; bake the cakes in a moderate oven to a very pale brown.

 Almonds, 1lb.; sugar, 1½lb.; eggs, 7 whites.

MACAROONS, COCOANUT.—Rasp a fresh cocoanut, spread it on a dish or tin, and let it dry gradually for a couple of days; add to it double its weight of fine sifted sugar, and the whites of eight eggs, beaten to a solid froth, to the pound. Roll the mixture into small balls, place them on a buttered tin, and bake them in a very gentle oven for about twenty minutes. Move them from the tin while they are warm, and store them in a very dry canister as soon as they are cold.

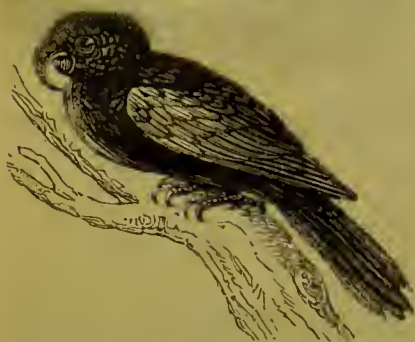
 Cocoanut, ½lb.; sugar, 1lb.; eggs, 8 whites.

MACAROONS, ORANGE FLOWER.—Have ready two pounds of very dry white sifted sugar. Weigh two ounces of the petals of freshly gathered orange blossoms after they have been fresh gathered from the stems; cut them very small with a pair of scissors into the sugar; add the whites of seven eggs; whisk the whole well together until it attains a snowy whiteness; then drop the mixture on to paper without delay, and place the cakes in a very cool oven.

 Sugar, 2lbs.; orange blossoms, 2ozs.; eggs, 7 whites.

MACASSAR OIL.—The preparation for the toilet thus named is compounded in various ways; the following is one of the most agreeable forms:—Oil of behn, one pint; cocoanut oil, half a pint; essence of bergamot, a quarter of an ounce; essence of musk, a quarter of an ounce; attar of roses, six drops. Infuse these ingredients in a bottle near the fire for two or three hours; then set the bottle by for a week, shaking the contents frequently; the oil will then be fit for use.

MACAW.—A bird of the parrot tribe, valued for its distinct and fluent articulation, and for the intelligence which it dis-



plays towards those to whom it is accustomed. It is, however, very capricious in temper, and when it forms dislikes, often evinces much malice. The red and blue macaw is a remarkably beautiful species. Another favourite variety is the blue and orange macaw, which is somewhat less in size than the preceding. This species does not learn to talk so readily as others, but is a better imitator of sounds, bleating like a sheep, mewling like a cat, and barking like a dog with admirable correctness and facility.

MACCARONI BOILED.—Drop the macaroni lightly and by degrees into a large pan of fast boiling water, into which a little salt and a piece of butter, the size of a walnut, have been previously thrown. In about three-quarters of an hour it will be sufficiently tender. Pour it into a large cullender, and drain the water well from it. The pipe macaroni should be suffered to remain entire, and served in that form. The ribbon macaroni is more quickly boiled than the pipe macaroni. Drop it gradually into plenty of boiling water, and turn it over occasionally, that it may be equally done. Drain it thoroughly when it is perfectly tender, and serve it quickly, either quite plain, or with a compote of fruit.

MACCARONI PUDDING.—Mix a quarter of a pound of macaroni with a pint of good milk, and, when quite tender, sweeten with brown sugar, and add a little more milk, and three eggs well beaten. Bake in a buttered dish in a Dutch oven for three-quarters of an hour.

☞ Macaroni, $\frac{1}{2}$ lb.; milk, 1 pint; sugar, to sweeten; eggs, 3.

MACCARONI SOUP.—Take four onions, two carrots, and one turnip; cut them into slices with an ounce of butter, an ounce of allspice, and a few sweet herbs; fry these ingredients together in a stewpan until they are of a delicate brown; then boil them in four quarts of stock for half an hour: have ready a pound of dry flour, and mix it with cold water, together with two spoonfuls of salt, and one of pepper; strain it through a sieve, and let it boil for five minutes; have ready half a pound of macaroni; put it to the stock, and serve.

☞ Onions, 4; carrots, 2; turnip, 1; butter, 1oz.; sweet herbs, a few; allspice, 1oz.; stock, 4 quarts; flour, 1lb.; water, sufficient; salt, 2 teaspoonfuls; pepper, 1 teaspoonful; macaroni, $\frac{1}{2}$ lb.

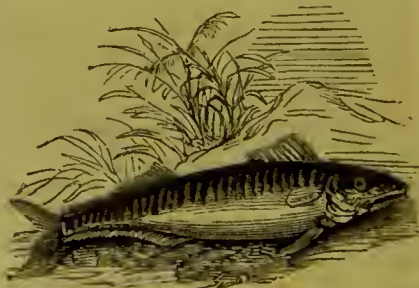
MACCARONI, SWEET.—Drop gently into a pint and a half of new milk, when it is boiling fast, four ounces of pipe macaroni; add a few grains of salt, and about a dozen thin strips of lemon or orange rind. Simmer the macaroni by a gentle fire until it is tolerably tender, then add from two to three ounces of sugar broken small; boil the macaroni till the pipes are soft, and swollen to their full size; drain and arrange it in a hot dish; stir the milk quickly to the yolks of three eggs well beaten; agitate them briskly over the fire until they thicken, pour them over the macaroni, and serve it immediately.

☞ Milk, $1\frac{1}{2}$ pint; pipe macaroni, 4ozs.; strips of lemon-rind, 12; sugar, 2 to 3ozs.; eggs, 3 yolks.

MACE.—The second coat of the nutmeg. It is highly aromatic, but distasteful if employed in excess; many persons dislike the flavour of it altogether, therefore it should never be used when cooking for mixed parties. As a stomachic, it resembles nutmeg in its effects. The essence of mace may be made in the same way as the essence of clove.

MACERATION.—A process frequently required to be performed in compounding medicines, and in culinary operations. It is performed by simply immersing the substance which is to be acted upon in cold water or spirits for a certain time.

MACKEREL.—This well-known fish is one of the most beautiful as regards the



brillancy of its colours, and at the same time one of the most useful to man as an article of food. The usual length of the

mackerel is about fourteen inches, or varying from twelve to sixteen. It is a voracious feeder, and its growth is rapid; but it is not the largest kind that are accounted the best for the table. Those taken in May and June are considered superior in flavour to such as are caught either in the spring or autumn. There are various modes of fishing for mackerel; but the way in which the greatest numbers are taken, is by draft-nets.

MACKEREL BAKED.—Open the fish only just sufficient to admit of their being emptied and perfectly cleaned. Wash and wipe them dry, then fold them in a soft cloth, and let them remain in it awhile. Replace the roes, and put the fish into a baking-dish of suitable size, with a tablespoonful of wine, a few drops of chili vinegar, a little salt and cayenne, and about half an ounce of butter, well blended with a saltspoonful of flour for each fish. They must be turned round with the heads and tails towards each other, that they may lie compactly in the dish, and the backs should be placed downwards, that the sauce may surround the thickest part of the flesh. Lay two buttered papers over the fish, and press them down upon them; set the dish into a gentle oven for twenty minutes, take off the papers, and send the fish to table in their sauce.

MACKEREL BOILED.—Wash and cleanse the fish thoroughly, put them into cold water, with a handful of salt in it; let them simmer rather than boil; a small mackerel will be sufficiently done in about a quarter of an hour; and the surest indication that they are done is by the eye starting, and the tail splitting. After this, remove them immediately from the water; for they are so delicate, that the heat of the water will break them. In general, the mackerel is boiled too much, and the roe too little. The best way is to make a slit opposite the middle of the roe; this will allow the water to have access, so that the roe will be done as soon as the fish. For sauce, see FENNEL SAUCE, GOOSEBERRY SAUCE, and PARSLEY AND BUTTER.

MACKEREL BROILED.—Cleanse a fine large mackerel, wipe it on a dry cloth, and cut a long slit down the back; lay it on a clean gridiron, over a clear slow fire; loosen it gently should it stick, which it will do unless often moved; when one side is done, turn it on the other; and when both sides are finished, turn the back to the fire: about half an hour will broil it well. For sauce, mix well together a little fine minced fennel or parsley, seasoned with pepper and salt, and a bit of fresh butter, and when the mackerel are ready for table, put some of this into the fish.

MACKEREL FRIED.—After washing and cleansing the fish thoroughly, cut off the heads and tails, split the bodies quite open and remove the back-bones; wipe the mackerel very dry, dust fine salt and pepper over them; flour them well; fry them a fine brown in boiling lard, drain them thoroughly, and serve with the following sauce:—Dissolve in a small saucepan an ounce and a

half of butter smoothly mixed with a teaspoonful of flour, and a little salt and cayenne; shake these over a gentle fire until they are lightly coloured, then add by slow degrees half a pint of good broth or gravy, and the juice of a large lemon; boil the sauce for two or three minutes, and serve it very hot.

MACKEREL MARINADED.—Clean the fish thoroughly and cut off the heads; rub plenty of pepper, salt, and allspice into the inside; place them in layers in a baking-dish, with bay leaves between the layers, and add three parts vinegar and one of water, sufficient to fill the dish; add a little whole pepper, and a blade or two of mace. Bake slowly for about five hours. When cold, remove the fish and marinade into another dish, taking care not to bruise or break them.

MACKEREL PRESERVED.—Select fine fish, cleanse them thoroughly, and lightly fry them in oil; divide the fish, remove the bones, heads, and skins, and rub the flesh well over with the following seasoning:—for every dozen fish, take three tablespoonfuls of salt, an ounce and a half of black pepper, half a dozen cloves, a blade or two of mace, and a nutmeg grated; mix these ingredients well together, and cover the surface of the fish well with the seasoning; then place the fish in layers packed into a stone jar (not glazed), cover the whole with vinegar; and if the fish is to be preserved for any length of time, pour salad oil or melted suet over the top. In this way the fish will keep for months.

MACKEREL SOUSED.—Wash and cleanse the mackerel well, and remove the roes; boil the fish in salt and water; take them out when done enough, and lay them in a deep dish; pour away half the liquor they were boiled in, and add to the rest of the liquor as much vinegar as will cover them, together with two or three bay leaves. They should be two or three days before they are eaten.

MACKEREL STEWED.—Work very smoothly together a dessertspoonful of flour with two ounces of butter, put them into a stewpan, and stir them round over the fire until the butter is dissolved; add a quarter of a teaspoonful of mace, half a teaspoonful of salt, and a little cayenne; pour in by slow degrees three glasses of claret; and when the same boils, lay in a couple of fine mackerel well cleansed and wiped dry; stew them very gently for fifteen or twenty minutes, and turn them when half done; lift them out, dish them carefully, stir a teaspoonful of made mustard to the sauce, give it a boil, and pour it over the fish.

MACKEREL, TO CARVE.—Mackerel should be served in pieces cut through the side, when they are large. If small, they may be divided through the back-bone and served in halves. The shoulder part is considered the best.

MACKEREL, TO CHOOSE.—This fish loses life as soon as it leaves the sea, and the fresher it is the better. The firmness of the flesh, the clearness of the eyes, and the bril-

liancy of its colour, are the criteria of fresh mackerel. Mackerel are in their highest perfection early in the season, when they have the least roe; when they are fullest of roe they are valuable for the roe only, the flesh having scarcely any flavour. After they lose their roes they are not worth catching, the roe, which was all that was good of them, being gone. There is also an after-season, when a few large fine mackerel are taken, about the month of October; these fish having had time to fatten and recover their health, are full of high flavour, and their flesh is firm and juicy; they are commonly called silver mackerel, from their beautiful colour and appearance.

MADDER.—This plant has a perennial root and an annual stalk. The soils best



suited to the cultivation of madder are deep, fertile, sandy loams, not retentive of moisture, and having a considerable portion of vegetable matter in their composition. The preparation of the soil may either consist in trench ploughings, lengthwise and across, with pronged stirrings, so as to bring it to a fine tilth; or, what will often be found preferable, by one trenching two feet deep by manual labour. The sets or plants are best obtained from runners, or surface roots of the old plants. These, being taken up, are to be cut into lengths of from six to twelve inches, according to the scarcity or abundance of runners. Sets may also be procured by sowing the seeds in a fine light earth a year before they are wanted, and then transplanting them; or sets of an inch may be planted one year in a garden, and then removed to the field plantation. The season of planting is commonly May or June, and the manner is generally in rows nine or ten asunder, and five or six inches apart in the rows. The after-culture consists in hoeing and weeding, with stirring by pronged hoes, either of the horse or hand kind. The crop is taken at the end

of the third autumn after planting, and generally in the month of October. Drying the roots is the next process, and, in very fine seasons, may be sometimes effected on the soil, by simply spreading the plants as they are taken up; but in most seasons they require to be dried on a kiln, like that used for malt and hops. They are dried till they become brittle, and then packed up in bags for sale to the dyer. In judging of the qualities of the madder root, the best is that which, on being broken in two, has a bright red or purple appearance, without any yellow cast being exhibited. The use of madder-roots is chiefly in dyeing and calico-printing. The haulm which accumulates on the surface of the field, in the course of three years, may be carted to the farm-yard and fermented along with the horse-litter. Madder-seed in abundance may be collected from the plants in the September of the second and third years.

MADEIRA CAKE.—Whisk four eggs until they are as light as possible, then, continuing still to whisk them, throw in by slow degrees the following ingredients, in the order named:—six ounces of sifted sugar, six ounces of flour dried and sifted, four ounces of butter slightly dissolved, but not heated; the rind of a fresh lemon; and the third of a teaspoonful of carbonate of soda, beat well in just before the cake is moulded; bake it for an hour in a moderate oven. In making this cake, be particular that each portion of the butter is beaten into the mixture until no appearance of it remains, before the next is added.

Eggs, 4; sugar, 6ozs.; flour, 6ozs.; butter, 4ozs.; lemon, 1 rind; carbonate of soda, $\frac{1}{3}$ teaspoonful.

MADEIRA CIDER.—Take new cider from the press, mix it with honey till it will float an egg; boil it gently for a quarter of an hour, but not in an iron saucepan; take off the scum as it rises, let the liquor cool, then barrel it, without filling the vessel quite full; bottle it off in March. In six weeks after it will be fit for use, and strong as Madeira.

MADNESS.—Disease of the brain eventuating in loss of reason, assumes many shapes, and has many forms and conditions; though the term madness with some degree of reason is applied to all, abstractedly considered, and relatively understood, no phrase can be more faulty and objectionable. Insanity, idiocy, cretinism, imbecility, dementia, and melancholia, or melancholy madness, are some, though by no means all, the forms of mental aberration that come under this very comprehensive term. Each of these forms of madness, or loss of judgment and imagination, has a distinctive character of its own, and has either been excited by some other disease; some great commotion of the system, caused by violent excitement of the passions; by direct injury to the head; exposure, uncovered, to the influence of the summer sun, causing a sun stroke; to some diseased condition of the brain, induced by some specific affection of that organ; or an hereditary cause, the consequence of a redundancy or diminution

in some of the lobes of the brain, in which case, the disease being born with the patient, there can be no hope of cure or improvement.

Insanity, or that madness which—of a temporary character, produced and kept alive by an active disease elsewhere in the body than the brain itself, though that organ occasionally is the primary cause—is a symptomatic form of madness subsiding, in general, when the disease that provoked it is cured.—See *INSANITY*.

Idiocy, being that hopeless state of fatuity, the consequence, as has been said, of a defective development of the brain, and born with the patient, it has been thought unnecessary to refer to it in a more particular manner, the great variety of such cases only filling the mind with painful images.

Cretenism is a special variety of idiocy, indicated by a large head, square visage, wide mouth, thick ears, and goitres; in fact, it is the idiocy peculiar to that form of scrofula whose most marked feature is the *goitre*, attacking whole tribes of people in different parts of the world, and who, in addition to a fatuity of mind and an enlarged neck, are noted by a dwarfish stature, seldom exceeding four feet.

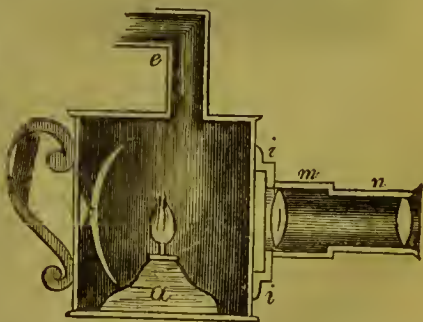
Melancholia is that variety of madness depending on some chronic state of disease, whose chief attributes are, a sad and desponding state of mind; a settled melancholy, that only sees despair and sorrow in every purpose of life; and though the imagination may only pursue one line of reasoning, the patient contemplates it as devoid of every ray of hope, and eagerly seeks to terminate his existence before the event he broods upon can overtake him. To such persons an unreasonable dread of poverty is the most frequent form in which the madness shows itself, and from the apprehension of which no relief offers itself to the patient but suicide. Melancholy madness most frequently results from a chronic state of insanity, or, in other words, insanity, if long standing, is in certain constitutions liable to degenerate into melancholia. The treatment of this disease is almost entirely of a moral character, and must consist in frequent change of scene and society, exercise, and lively conversation, any temporary oppression of the head being relieved by a few leeches, and an occasional aperient; at the same time, without seeming to do so, maintaining an unceasing watch over the patient, and while apparently reposing confidence in his honour, never relaxing the vigilance of supervision.

Hypochondriasis, or vapours, as it is sometimes called, very often assumes a species of aberration closely resembling melancholy madness; and like the many varieties of what is called *monomania*, or madness on one subject, difficult to determine whether primarily depending on a diseased state of the brain, or of the digestive organs. The treatment in all such cases must conform as near as can be traced to the exciting cause, though in all such cases, medicine is generally much less necessary than moral suasion, and the promotion of a healthier action of mind

and body, by change of air and invigorating exercise, especially such as rowing, swimming, fencing, climbing hills, horse-riding, and quick walking.

There only remains one other form of madness to be considered, *mania*, properly so called, or raving madness; but as this is a subject so distinct from all the other forms of temporary aberration; is induced by so many and contrary causes; and demands a course of treatment so distinct, that it would be unnecessary to do more than give the general symptoms, and indicate the broad principles on which the treatment is based; all patients so affected, both for their own comfort and to further the chance of their recovery, are treated in establishments specially adapted for the purpose. There are many cases of confirmed madness, where the patient is neither raving nor furious, but in which more or less of the same symptoms are common to that condition: these are, delirium without fever, flushed face, and wild expression of countenance, sharp pains in the head, ringing in the ears, rolling and flashing eyes, grinding of the teeth, loud roarings, and violent muscular exertions, rooted antipathies to objects and places formerly beloved or attached to, insensibility or indifference to heat and cold, hunger, thirst, or watching, and attended throughout by a quick, full, and hard pulse. A remarkable peculiarity with all maniacs is, that periodically, or once a month, or at the full of the moon, all the symptoms are exaggerated, and occasionally a perfect remission of the symptoms, the patient enjoying lucid intervals; from this periodicity they are called lunatics. The treatment consists in carrying out the three following objects, each indication, as it is called, requiring a distinct treatment: first, to gain a perfect command over the maniac; secondly, to divert his mind from the existing train of thought; and thirdly, to diminish the preternatural action of the brain.

MAGIC LANTERN.—The object of this ingenious instrument is to represent, in a dark room, on a white wall or cloth, a succession of enlarged figures of remarkable,



natural, or grotesque objects. The mechanism of the magic lantern is illustrated in the accompanying engraving. It consists of a tin box, with a funnel on the top, repre-

sented by *e*, and a door on one side of it. This funnel, by being bent, serves the double purpose of letting out the smoke and keeping in the light. In the middle of the bottom of the box is placed a moveable tin lamp, *a*, which must have two or three good lights at the right of the centre of the polished tin reflector, *c*. In the front of the box, opposite the reflector, is fixed a tin tube, *m*, in which there slides another tube, *n*. The sliding tube has at its outer extremity a convex lens, of about two inches diameter; the tube *m* has also a convex lens fixed in it, as shown in the figure, of three inches diameter. The focus of the smaller of these lenses may be about five inches. Between the tube *m*, and the lamp, there must be a slit or opening, as at *ii*, to admit of the passage of glass sliders, mounted in paper or wooden frames, upon which sliders it is that the miniature figures are painted which are intended to be shown on the wall. The distinctness of the enlarged figures depends not only on the goodness of the magnifying glass, but upon the clearness of the light yielded by the lamp *a*. To paint the glasses, first draw, on a paper of the size of the glass, the subject you desire to paint; fasten this at each end of the glass with paste, or any other cement, to prevent it from slipping. Then, with some very black paint mixed with varnish, draw with a fine camel's hair pencil, very lightly, the outlines sketched on the paper, which, of course, are reflected through the glass; and when dry, fill up the other parts in their proper colours. Transparent colours must be used for this purpose, such as carmine, lake, Prussian blue, verdigris, sulphate of iron, tincture of Brazil wood, gamboge, &c.; and these must be tempered with a strong white varnish, to prevent their peeling off. Then shade them with black, or with lustre, mixed with the same varnish. One of the most striking effects produced by a magic lantern is that of a storm at sea. This is effected by having two sliders painted, as seen in the annexed



figures, one with the tempest as approaching on one side, and continuing in intensity till it reaches the other. Another slider to have ships painted on it, and while the lantern is in use, the slider representing the ships is dexterously withdrawn before the other, so that the two represent ships in a storm. To exhibit the magic lantern, the lamp being lighted, and the room darkened, place the machine on the table, at some distance from

the white wall or suspended sheet, and introduce into the slit, *ii*, one of the sliders, with the figures inverted. If the moveable tube, *n*, be then pushed in, or drawn out, till the proper focus be attained, the figures on the slider will be reflected on the wall, in their distinct colours and proportions, with the appearance of life itself, and of any size from six inches to seven feet, according to the distance of the lantern from the wall. Movements of the figures are easily made by painting the subject on two glasses, and passing the same through the groove. The effects of sunrise, moonlight, starlight, &c., may be imitated by means of double sliders, and figures may be introduced sometimes of ludicrously exaggerated proportions. Heads may be made to nod, faces to laugh, eyes to roll, teeth to gnash; crocodiles may be made to swallow tigers; and combats may be represented. One of the most instructive uses of this instrument is to make the sliders illustrative of astronomy, and to show the rotation of the seasons, the cause of eclipses, the mountains in the moon, spots on the sun, and the various motions of planetary bodies and their satellites. To construct a solar magic lantern, make a box twelve inches high, eighteen inches wide, and about three inches deep. Two of the opposite sides of this box must be quite open, and in each of the other sides there should be a groove wide enough to admit a stiff paper or pasteboard. The box must then be fastened against a window on which the sun's rays fall direct; and the rest of the window must be closed up, that no light may enter. Next, provide several sheets of stiff paper, blacked on one side. On these papers cut out such figures as fancy may dictate; place them alternately in the grooves of the box with their black sides towards you, and look at them through a large and clear glass prism; and if the light be strong, they will appear painted with the most lively colours. If you cut out one of these papers the form of a rainbow, about three-quarters of an inch wide, you will have a very good resemblance of the natural one.

MAGNESIA.—An alkaline earth largely used in medicine, in the form of the pure or calcined magnesia; also in the form of the carbonate or bicarbonate, which latter, being soluble, constitutes the fluid magnesia of the shops. In combination with sulphuric acid, it forms sulphate of magnesia or Epsom salts. The principal use of magnesia is an antacid in acidity of the stomach and bowels; and at the same time, provided it meets with acid, acts as a gentle aperient; it is often combined with rhubarb, Epsom salts, &c. The effectual manner in which magnesia neutralizes acid in the stomach, thereby relieving heart-burn and other uneasy sensations, has led to its being considerably abused by dyspeptics generally, whereby much evil has resulted; for the continued use of magnesia as an antacid greatly impairs the digestion; moreover, if used in the form of calcined magnesia, or of carbonate, should it not encounter sufficient acid in the alimentary canal to convert it into a soluble aperient salt, it is apt to

accumulate, and, if taken regularly and largely, to collect into and form concretions in the bowels; on this account, persons who insist upon taking magnesia habitually, ought to be careful to clear the bowels thoroughly, at intervals, by means of a dose of castor oil; the same rule being observed with regard to children, if magnesia is given to them regularly. Fluid magnesia in doses from half an ounce to two ounces, may be taken either alone or in milk, the latter mode being convenient for children; or it may be given as an effervescent draught with lemon-juice.

MAGNETISM.—The power of the magnet to attract or repel iron and certain other substances, enables us to perform some very amusing experiments with startling effect. The magnetic fish are experimented with as follows:—These fish are to be purchased at the toy shops, they are made hollow, and will float on the water. In the mouth of each should be inserted a piece of magnetic wire. The angling rod is like any other rod, and has a silken thread



for a line, and an iron hook also, strongly magnetised. To catch the fish it is only necessary to put the hook in contact with the gills of the fish, and they will be immediately taken. *The magnetic swan.*—Cut in cork the figure of a swan, and cover it with a coat of white wax, making the eyes of glass beads; conceal within its body a piece of magnetised steel, and set it afloat upon a basin of water. Round the edge of the basin may be placed various devices, and, among others, a swan-house, such as is seen upon a river; here the swan may take shelter occasionally, and in it he may be made to turn round to increase the astonishment of the spectators. By means of the magnetic bar placed within the swan, and the magnetic wand, the figure may be made to approach or recede, by presenting to the edge of the basin the north and south poles alternately. The wand is thus made: Bore a hole three-fourths of an inch in diameter through a round stick, or get a hollow cane, about eight inches long and half an inch thick; provide a small steel bar, and let it be very strongly magnetised; insert this rod into the hollow part of the wand, and close it at both ends

by two small pieces of ivory. This contrivance is applicable to several other floating objects, as ships, &c. Magnets fre-



quently consist of a single bar bent in the form of a horse shoe. In this form of magnet, the two poles are brought near each other, and are connected by means of a piece of untempered iron, called an armature, by which the sustaining power of the magnet is much increased. It also enables us to apply the two poles to the experiment, as seen in the engraving, where, from a hook attached to the armature, there hangs a scale in which weights are placed to the amount of many pounds. Before applying the armature, if you place on the smooth ends of the poles a thin piece of wood or paper, you will find that the armature will still adhere with considerable force. If the magnet be hung up in this position, and the weight gradually increased day by day, its lifting power will increase very materially. To make a



number of little magnets, proceed as follows:—Employ a bar-magnet, at one end of which a notch is cut to indicate the north pole. Place this magnet upon paper, and sift over it iron filings, when such as are not attracted by the magnet, will, when shaken off, arrange themselves nearly in a star-like form, in greatest number at and about the poles, where the attraction is strongest. The filings may be also made to fall into beautiful curves by the following contrivance. Stretch a large sheet of paper upon a frame of wood, and place it flat upon a table. Put under the paper, so as just to touch it, a bar-magnet; sift a thin layer of iron filings upon the paper, gently tap its under surface, when it will vibrate, and the magnetic force will arrange the filings in pretty figures. In this experiment each filing becomes a perfect magnet. If a steel ring be magnetised, the magnetic properties remain concealed while the ring is whole, but if it be broken at any point, each fragment will be found to possess the properties of a common magnet. A string of magnets may be made by placing a bar-magnet upon a table, with its north pole projecting over the edge; then hold a key near it, present a

small nail to the end of the key, and it will be suspended in consequence of its induced magnetism. To the first nail, a second, third, and fourth may be successively attached. The lower end of the key and the points of the nails are then respectively north poles, while the upper end of the key and the heads of the nails are respectively south poles. Then gradually remove the key and the attached nails from the projecting magnet, when they will get beyond its influence, and, consequently, losing all magnetic power, the nails will fall to the ground. If, instead of holding the key at a certain distance from the magnet, you at once bring it close to it, and apply the nails to the key, and then place the south side of another magnet



near to or in contact with the lower end of the key, its handle will be repelled and the north end of the first magnet will be attracted by the south end of the second; consequently, the key with the hanging nails will fall. A great number of other interesting experiments may be made through the medium of the same agents.

Books: *The Boy's Own Book*, 6s.; *Every Boy's Book*, 5s. 6d.

MAGNOLIA.—A genus of plant of a noble form, and in general white flowered. It is propagated by seeds, layers, graftings, and budding, and each of these modes is suited to the several kinds. The seeds



should be sown in a hot-bed in spring, and as the seeds successively appear, they must be potted and kept several years in a cold

pit in winter. Though the most vigorous plants are thus raised, yet as they are a long time ere they bloom, preference is usually given to plants raised from layers of all the stronger growing kinds. These are generally laid down in the autumn, and the better part of two years usually elapses before they are fit to be moved, when they should be potted and kept in a pit until well established. No one should purchase a young plant, except in a pot as the few, but large fleshy roots are easily injured. Some of the more succulent-stemmed kinds, with large pits, can neither be easily layered nor grafted. For these, cuttings are the best. Most of the varieties may be budded, grafted, and in-arched on the kinds which are the strongest and most easily recased. All the sorts when planted out flourish best in a deep sandy soil, quite dry and enriched with peat and leaf mould.

MAGPIE.—A handsome-looking bird, of a variegated black and white plumage, beautifully shaded with green, blue, and purple. Young birds should be taken from



the nest at about a fortnight old, if it is wished to render them tame; and when sufficiently fledged, they may be allowed to fly to a neighbouring tree, enticing them back again to the place where they are intended to remain; this is repeated until they are fully fledged, when the pinion feathers should be slightly clipped. By this means they will soon become familiar with their home, and frequently return to it after enjoying a few hours' liberty. The magpie imitates musical sounds, the voices of animals, and will speak with tolerable distinctness. It is capable of becoming attached to its attendant, which it evinces by following him about, rubbing itself against him until it is stroked, and by various other actions. The magpie in its domesticated state will eat almost anything, but is fondest of cooked meat, and other viands brought to table. This bird has a singular habit of secreting things, especially those of a bright and shining nature, as silver spoons, forks, &c., and pieces of gold and silver money.


MAHOGANY.—A well-known timber, extensively used in the manufacture of various articles of household furniture, and for many other purposes. The great recommendation for this wood is its durability,

for chairs, tables, sofas, bedsteads, &c., made of it will, with ordinary care, last for very many years. The polish also, which gives it such a handsome appearance, may be preserved by bestowing a little attention upon it from time to time. Care should be taken not to place heated plates, dishes, and other vessels upon tables, by which the veneer is apt to be drawn from the wood; neither should mugs or cups with wet rims be placed on tables, by which stains are left that are very difficult of removal, and sometimes cannot be eradicated except by putting on a fresh coat of veneer. *To restore the colour of mahogany*, wash it well with soap and water, and then polish it daily with the following mixture:—Take half an ounce of alkanet root, cut small, and add to it a pint of linseed oil; when this has stood for a week, add half an ounce of gum arabic, and an ounce of shellac varnish; let these stand by the fire for a week; then strain. Rub well in. *To improve the colour of mahogany*, put into a pint of cold drawn linseed oil an ounce of alkanet root and an ounce of rose pink, mix these in an earthen vessel, and let the mixture remain all night; then, after stirring it well, rub some of it over the mahogany with a linen rag; when it has lain some time, polish with a linen cloth. *An artificial mahogany* may be produced from any species of wood of a close grain, by the following method:—Plane the surface of the wood smooth, and rub it with a solution of nitrous acid; dissolve an ounce of dragon's blood in a pint of spirits of wine, and a third of an ounce of carbonate of soda; mix them together, filter the liquid, and lay it on with a soft brush. Repeat the process, and in a short interval afterwards the wood will be found to possess the external appearance of mahogany. When the polish diminishes in brilliancy, it may be restored by the application of a little cold-drawn linseed oil. *To remove stains from mahogany*.—See INK-STAINS, WINE-STAINS, &c.

MAID OF ALL WORK.—A domestic servant, who undertakes the whole duties of a household without assistance; her duties comprising those of cook, bousemaid, nnserymaid, and various other offices, according to the exigencies of the establishment. The situation is one which is usually regarded as the hardest worked and worst paid of any branch of domestic servitude; it is, therefore, usually filled by inexperienced servants, or females who are so circumstanced that they are only desirous of securing a home, and of earning sufficient to keep themselves decently clad. In many of these situations, a servant may be very comfortably circumstanced, especially if it be a limited family of regular habits, and where there is a disposition to treat the servant with kindness and consideration. The duties of a maid of all work being multifarious, it is necessary that she should arise early in the morning; and six or half-past six o'clock is the latest period at which she should remain in bed. She should first light the kitchen fire, and set the kettle over to boil; then she should

sweep, dust, and prepare the room in which breakfast is to be taken. Having served the breakfast, she should, while the family are engaged upon that meal, proceed to the various bedchambers, strip the beds, open the windows, &c. This done, she will obtain her own breakfast, and after washing and putting away the things, she will again go upstairs, and finish what remains to be done there. As the family will in all probability dine early, she must now set about the preliminaries for the dinner, making up the fire, preparing the vegetables, &c. After the dinner is cleared away, and the things washed and put by in their places, she must clean the kitchen; and this done, she is at liberty to attend to her own personal appearance, to wash and dress herself, &c. By this time the preparation for tea will have to be thought of, and this being duly served and cleared away, she must employ herself in needlework in connection with the household, or should there happen to be none requiring to be done, she may embrace this opportunity to attend to her own personal necessities. Supper has then to be attended to; and this finished, the maid of all work should take the chamber candlesticks, hot water, &c., into the sitting-room, and retire to rest as soon as her mistress or the regulation of the establishment will permit her. The duties here set down can only be regarded as an outline rather than a detail, the habits of every family varying, and thereby regulating the amount of labour demanded, and the order in which the duties are to be performed. As a rule, however, a maid of all work, if she wish to retain her situation, must be industrious, cleanly, and thoughtful; and not only able to work, but to plan.

MAIDS OF HONOUR.—Cakes made as follows:—Beat a pound of broken loaf-sugar, with the yolks of twelve eggs, in a mortar, an ounce of blanched sweet almonds, and twelve bitter, and four tablespoonfuls of orange-flower water. The almonds must be mixed in, the last thing, before the pattypans are filled. Bake in a moderately heated oven.


 Sugar, 1lb.; eggs, 12 yolks; almonds, 1oz. sweet, 12 bitter; orange-flower water, 4 tablespoonfuls.

MAIZE.—See INDIAN CORN.

MALT.—A term applied to grain which has been made to germinate artificially to a certain extent, after which the process is stopped by the application of beat. The barley is steeped in cold water for a period not less than forty hours; when it is sufficiently steeped, the water is drained off, and the barley thrown upon the malt floor, where it is formed into a rectangular heap, sixteen inches deep. In this state it remains for about twenty-six hours. It is then turned by means of wooden shovels, and diminished a little in depth; this operation is repeated twice or thrice a day, and the grain is spread thinner and thinner, till, at last, its depth does not exceed a very few inches. On the comb it absorbs oxygen from the atmosphere, which it converts into carbonic

acid; the temperature gradually increases, and in about four days the grain is ten degrees hotter than the surrounding atmosphere. The grain now becomes moist, and exhales an agreeable odour; this is called sweating. The maltster must prevent the temperature from becoming excessive by turning. It may vary from fifty-five to sixty-two degrees. At the period of sweating, the roots of the grains begin to appear. In one day after the sprouting of the roots, the rudiments of the future stem may be seen to lengthen. As it shoots along the grain, the mealy part undergoes a considerable change. The glutinous and mucilaginous matter is taken up and removed, the colour becomes white, and the texture so loose, that it crumbles to powder between the fingers. As soon as this change is accomplished, the process is stopped by drying the malt upon a kiln. The malt is then cleaned, to separate the small roots, which are considered injurious. Barley, by malting, generally increases two or three per cent. in bulk, and loses about one-fifth of its weight.

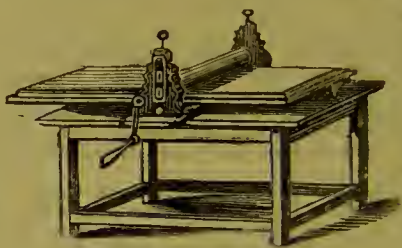
MALT WINE.—Boil thirty pounds of sugar with ten gallons of water for half an hour; skim the liquor well; set it by to cool; and when milkwarm, add five gallons of new ale; simmer the whole gently; let it cool; place it in a tub, and leave it to ferment for two days: at the end of that time, transfer it to a cask, with a pound of powdered sugar-candy, and four pounds of raisins, chopped small; when the fermentation ceases, it may be racked and fined. It will be fit to bottle at the end of six or twelve months, and may be drunk two or three months afterwards.

 Sugar, 30lbs.; water, 10 gallons; ale, 5 gallons; sugar-candy, 1lb.; raisins, 4lbs.

MANGE.—A cutaneous disease in dogs, very closely resembling itch in the human species; it is hereditary as well as contagious. There are many causes which beget this disease, but the acrid effluvium from their own secretions is the most common; when it is generated by numbers, particularly when it is confined within a limited space, it is sure to appear. Close confinement of any dog will usually produce this complaint, and most certainly so, if the animal be at the same time fed on salt provisions. Food too nutritive in quality, and too considerable in quantity, is productive of mange; and, on the contrary, food in a great measure withheld or being very poor in quality, is equally a parent of the disease. The following will, in general, be found effectual: Powdered sulphur, four ounces; hydrochlorate of ammonia (sal-ammoniac) powdered, half an ounce; aloes powdered, one drachm; Venice turpentine, half an ounce; lard, or other fatty matter, six ounces; the whole to be mixed, and administered in boluses. A wash may also be made of two ounces of foxglove leaves, put into a jug, and a quart of boiling water poured over them. When the liquor is cold, wash the dog with it, and repeat the washing every other day; a few drenchings will effect a cure. In very virulent cases, how-

ever, no one should attempt doctoring his dog, but should apply to a regular practitioner.

MANGLING.—A process in connection with the laundry, which is usually adopted for articles of domestic use, or wearing apparel of a coarse or plain kind. The articles to be mangled are wrapped round rollers, and are forced backward and forward under a heavily loaded case. The art consists chiefly in laying the clothes smoothly upon the cloth, and in arranging them in such a way that those of equal substance shall come together, so that the surface may not be rendered irregular. Most articles are folded two or three times, and come out better when so arranged than they do when put in the mangle in single folds. Beyond this, it is only necessary to roll them evenly on the rollers, and lay them in the mangle. Articles which have buttons attached to them, are not adapted for the mangle; when the buttons are made of slender material they are liable to be crushed, and if made of metal they are apt to cut the fabrics brought into contact with them, and also to cause iron-moulds. The ordinary mangle is a machine of large dimensions, which the premises of a private establishment are sometimes not large enough to contain. A smaller kind of mangle has been therefore invented, acting by means of a spring or some other substitute for the mere force of weight. Of these, the mangle shown in the engraving is the best. It is portable; and the bed on which the linen is mangled is



not a fixture as in the ordinary mangle, but traverses backward and forward, whilst the roller on which the linen is placed, remains stationary. The pressure is obtained by means of springs adjusted by a screw, and the roller is either of metal or wood. The figure shows the machine placed upon an ordinary table; but when taken to pieces it consists of the bed, and also of the roller and works, which may be contained within a box two feet eight inches long and one foot square.

MANGOLD WURZEL.—A root cultivated for feeding cattle in the winter months. About three or four pounds of seed per acre are drilled or dibbled in in May, at a distance of eighteen or twenty-four inches. The produce is so abundant that an acre will keep twelve cows, at sixty pounds per day, for five months. Mangold wurzel is a hardy and reliable root, and is

singularly free from the attacks of the fly or the grub; it is off the land early, and is useful as a change of fallow crop, when the soil is exhausted by turnips; it will grow on land where turnips cannot be raised.

MANHEIM BREAD.—Mix together two eggs, six tablespoonfuls of flour, three tablespoonfuls of sugar, a quarter of a salt-spoonful of salt, and six drops of essence of aniseed; work these ingredients well together; cut the paste into the shape of long round biscuits, and bake in a quick oven.

Eggs, 2; flour, 6 tablespoonfuls; sugar, 3 tablespoonfuls; salt, $\frac{1}{4}$ of a salt-spoonful; essence of aniseed, 6 drops.

MANNA.—A medicine which acts as a very gentle laxative, and is therefore used for children and delicate persons. *Dose*, for children, from one to four drachms; and for adults, from one to two ounces, combined with rhubarb and cinnamon water.

MANURE.—By the term manure is meant any substance which is added to a soil to render it productive. Manures are either animal, vegetable, or mineral. They directly assist the growth of plants, by entering into their composition, by absorbing and retaining moisture from the atmosphere, by absorbing the gases of the atmosphere, and by stimulating the vascular system of the plants. Manures directly assist vegetation, by killing predatory vermin and weeds, by promoting the decomposition of stubborn organic remains in the soil, and by protecting plants from violent changes of temperature. All animal manures contain, in large proportion, the chief constituents of the food of plants—oxygen, hydrogen, and carbon, particularly the latter, in the form of ammonia, developed by the putrefactive fermentation. Vegetable manures act in three ways: they open the pores of the land, and lighten it by loosening its particles; they supply organic food to the roots of the growing plants, and they yield saline and earthy matters to the soil. Mineral manures are chiefly used in forming composts. Lime is the most important of all the mineral manures, but it is seldom used in the caustic state (that is, as quicklime) in gardens, unless it is in cases where the land has become soured by neglect and want of drainage. Marl, chalk, and shell-sand produce the same effect as lime, but in a more moderate degree, and marl is especially good for almost any soil. Manures of all kinds lose their efficacy, unless accompanied by sufficient drainage. When drenched with water, manures, both vegetable and animal, either decompose very slowly, or produce acid compounds more or less injurious to the plant. The absorbing power of manure is much influenced by the state in which it is presented to the atmosphere. In a finely divided state, mere capillary attraction assists it; hence the importance of keeping the soil frequently stirred by hoeing, &c. Stable manure, and all decomposing animal and vegetable substances, have a tendency to promote the decay of stubborn organic remains in the soil, on the principle that putrescent sub-

stances hasten the process of putrefaction in other organic bodies with which they come in contact. Salt, in a small proportion, is gifted with a similar septic property. Liquid manure is too strong, when applied fresh and undiluted, to any growing crop; for the ammonia which is disengaged is so acrid, that it will burn the plants to which it is applied. This is obviated, either by fermenting for two months or more, or by diluting largely with water, say three-fourths of water to one-fourth of liquid manure. Liquid manures must be applied sparingly to flowers, otherwise they will produce engorgement in the plants, from over-abundant nourishment, and do more harm than good.

Farmyard manure is one of the most common fertilizers applied to land. Some little care and discretion is required to economize this material properly, and to have it invariably ready for use. The situation of the dung-pit should be near the stables and cow-houses, and placed so that the refuse liquids from them should flow directly into their receptacle, so that nothing be lost. This pit may be three or four feet deep, and of a size proportionate to the stock of cattle usually kept by the farmer. It is not necessary that it should be built round with a wall, or have a particular descent, as it may slope gently inwards, and deepen gradually towards the centre. It should, if possible, be covered by a roof, to prevent the action of the sun. If the bottom be found firm, impervious, and capable of containing the juices, no further trouble is requisite, and the work is complete; in many instances, however, it will be necessary first to puddle with clay, and then line the bottom with flag-stones. Into this pit, earth with refuse straw should be brought, and strewed over the bottom and sloping sides, to the thickness of from nine to twelve inches, and this will form an inferior layer to absorb all that portion of that liquid manure which naturally runs to the bottom. The pit is now prepared to receive all kinds of animal and vegetable manure, which, when brought, should be always laid evenly over the surface. It is customary to cart away the material thus collected, at convenient opportunities (usually during the frosts in winter), to a place in the fields, near where it used to be, and there pile it up in a quadrangular heap about four feet high. Sometimes these dung-heaps, by exposure, lose a part of their valuable properties. In every instance, the dung-heap in the fields should be placed in a hollow situation, with a substratum of earth, and should have a scattering of a few inches of earth over it, and around the sides, to keep in the volatile gases. When the dung-pit has been thus emptied, it may again be progressively filled as before; and when it is carted out in any of the spring months, it will be found necessary to turn it once or oftener, for the purpose of accelerating the decomposition of the strawy part of the mass.—See **LIME, MARL, PEAT, SALT, SOOT, &c.**

MAP.—A plane figure representing the surface of the earth, or a part thereof.

Maps are not always to be used as they lie before us, for sometimes any part is uppermost; but generally the top is the north part, the bottom the south, the right hand the east, and the left hand the west. The degrees of longitude are always numbered at top and bottom, and the degrees of latitude on the east and west sides. In general maps the circles corresponding with those in the heavens are inscribed, viz.: the equator is expressed by a straight line east and west; and the first meridian, the polar circles, the tropics, and the other meridians and parallels, which are drawn at every five or ten degrees, intersect each other at right angles. There may be as many different projections as there are points of view in which a globe can be seen; but geographers have generally chosen those which represent the poles at the top and bottom of the map; these are called the stereographic, or the graphic and globular projections. If the eye be supposed to view the earth from an infinite distance, the appearance represented on a plane is called the orthographic surface. In this case the parts about the middle are very well represented, but the extreme parts are contracted. In the stereographic projection the eye is supposed to be on the surface of the earth, and looking at the opposite hemisphere. The globular projection is that in which meridians, equidistant upon the surface of the earth, are represented by equidistant circles in the map.

MAPLE TREE.—This is a fast-growing tree, and is well adapted for situations near the sea, as the salt spray seems to have no bad effect on its vegetation. The timber is very close and compact, easily cut, and not liable either to splinter or warp. Sometimes it is of a uniform colour throughout, and in other cases beautifully curled and mottled. This wood is not apt to warp, either with the variations of heat or of moisture; it is a suitable material for saddle-trees, wooden dishes, and many other articles both of furniture and machinery. When kept dry, and free from the attacks of insects, this tree will last a considerable time; but if exposed to humidity, it is one of the most perishable of trees. There are many varieties of this species, all partaking in a greater or less degree of the same characteristics.

MAPS, TO VARNISH AND COLOUR.—Maps may be effectively varnished by running a very delicate coating of gutta percha solution over the surface. *Wash colours* for maps may be used as follows: Yellow, gamboge dissolved in water. Red, Brazil dust steeped in vinegar, and alum added; or litmus dissolved in water, and spirit of wine added; or cochineal, steeped in water, strained, and gum added. Blue, Saxon blue diluted with water; or litmus, rendered blue by adding distilled vinegar. Green, distilled verdigris dissolved in water, and gum added; or litmus, rendered green by adding prepared kali to its solution.

MARASCHINO.—A delicate liqueur spirit, distilled from a peculiar cherry growing in Dalmatia, and afterwards sweetened with sugar. The best is from Zara, and is

obtained from the marasea cherry only. An inferior quality is distilled from a mixture of cherries and the juice of liquorice root. It ferments, and furnishes by distillation a prussic alcohol; but by putting it first to infuse in brandy for some time, there is obtained, by distillation in a bath heat, a spirit of a very agreeable aromatic flavour, and which, properly sweetened, forms a liqueur comparable to the best marasquin of Italy. It is necessary to bruise the fruit and the nuts before infusing them in brandy. The spirit must also be brought back to 21 degrees before sweetening it; then add nearly 12ozs. of sugar to every quart of liqueur.

MARBLE, TO CLEAN.—Mix a quarter of a pound of soft soap with the same quantity of pounded whiting, an ounce of soda, and a piece of stone-blue the size of a walnut; boil these together for a quarter of an hour; whilst hot, rub it over the marble with a piece of flannel, and leave it on for twenty-four hours; then wash it off with clean water, and polish the marble with a piece of coarse flannel. *To remove spots and grease from marble.* Make a paste with fuller's earth and hot water; cover the spots with it, and let it dry on; and the next day scour it off with soft or yellow soap.

MARBLE, TO IMITATE.—Dissolve an ounce of curd soap, grated in four ounces of water, in a glazed earthen vessel; add an ounce of white wax cut in thin slices; when the whole is incorporated, it is fit for use. Having dried the figure before the fire, suspend it by a string, and dip it into the mixture; when it has absorbed the varnish, dip it a second time, and that generally suffices. Cover it carefully from the dust for a week, then rub it gently with soft cotton wool, and a brilliant shining gloss will be produced exactly resembling polished marble.

MARBLING.—The process of transferring to books or paper the veins and marks resembling marble, is performed as follows: Dissolve four ounces of gum arabic in two quarts of filtered water; then provide several colours mixed with water in pots or shells, and, with pencils peculiar to each colour, sprinkle them, by way of intermixture, upon the gum-water, which must be put in some broad vessel; then, with a stick, curl them or drain them out in streaks, in every variety of design. Having done this, hold the book or books close together, and just dip the edges in on the surface of the water, and thus colour them very slightly.

MARCH, GARDENING FOR.—The following is an alphabetical list of plants and roots in the kitchen garden, which require attention during the month:—*Artichokes*, plant out, trench. *Asparagus*, sow in the third week, fill up vacancies. *Beans*, sow. *Brussels sprouts*, sow for autumn and winter crop. *Cabbages*, sow. *Cardoons*, sow. *Carrots*, sow. *Cauliflowers*, sow in the last fortnight for a full crop. *Celery*, sow. *Chives*, plant. *Composts*, form. *Horseradish*, plant. *Indian cress*, sow. *Insects*, destroy. *Lettuce*, sow and transplant. *Liquorice*, plant. *Onions*, sow for a full crop. *Parsnips*, sow. *Peas*, sow. *Perennial edibles*, propagate. *Rhubarb* (forced),

litter and trench. *Salads* (small), sow every fortnight. *Savoy*s, sow for an early crop, and towards the end of the month for a full crop. *Sea-kale*, plant. *Shalots*, plant. *Tur-nips*, sow.

General Remarks.—When the various crops of esculents have been obtained during the month, remove the litter from the trenches, and fill them with rich mould. Pay attention to the economy of seed, and drop them only where absolutely required. Do not lose a season for any of your kitchen garden seeds, most of the common sorts of which may, however, be now sown in sheltered borders, if the ground be in a good state. Stake peas, earth up cabbages, and put down cuttings of potherbs. Pick up and re-make gravel, and mow turf walks; dig and rake borders.

Flower Garden.—*Anemones*, earth up and water. *Auriculas*, top-dress, and cover frames on cold evenings. *Carnations*, plant slips, and top-dress. *Cuttings*, plant for forcing. *Dahlias*, sow in pairs, pot seedlings, and place near glass. *Pinks*, plant slips, top-dress. *Ranunculuses*, earth up and water. *Roots* of various plants, slip and part. *Roses*, peg down and finish pruning. *Stocks*, top-dress. *Seedlings*, prick out. *Tuberose*s, plant in pots for forcing. *Tulips*, guard carefully against frost and storms.

General Remarks.—This being the first month of spring, renders the flower garden a busy scene; and everything recommended for February should be continued through March, with the addition of many other things of equal importance. All plots and borders must now be smoothed by the rake, preparatory to sowing the first general crop of hardy annuals. All the different sorts of what are termed tender annuals, should now be sown in hotbeds, to raise plants ready for potting as soon as they are large enough to handle. Sow hardy annuals in the second, third, and last week; and some of the more robust of half hardy annuals, about the end of the month. Sow, also, such biennials as flower the same year, and also perennials towards the end of the month. Propagate by rooted slips and offsets. Plant dried roots. Transplant annuals from patches in the borders, and biennials and perennials from the flower-garden nursery into their final sites. Dry, dress, hoe, rake, &c., only in dry weather. Clean up all borders, and prepare vacant ground.

MARCH, THINGS IN SEASON.—*Fish*: brill, carp, cockles, cod, conger eels, crabs, dabs, dory, eels, flounder, ling, lobsters, mackerel, mullet, mussels, oysters, perch, pike, plaice, prawns, salmon, salmon-trout, shrimps, skate, smelts, soles, sturgeon, turbot, tench, and whiting.

Fruit: *Apples*—French pippins, golden russet, Holland pippins, John apple, Kentish pippin, nonpareil, Norfolk beaufin, Wheeler's russet. Chestnuts; oranges. *Pears*: bergamot, bugi, Charmontelle, St. Martial, bon chrétien, strawberries (forced).

Meat: beef, house lamb, mutton, pork, veal.

Poultry and Game: capons, chickens, ducklings, fowls, green geese, grouse, leverets,

moor-game, pigeons, rabbits (tame), snipes, turkeys, woodcocks.

Vegetables: artichokes, beet, brocoli, Brussels sprouts, cabbage, cardoon, carrots, celery, chervil, colewort, cresses, endive, garlic, herbs (dry), kale, lettuces, mint, mushrooms, onions, parsley, parsnips, potatoes, rosemary, sage, shalots, spinach, tarragon, thyme, turnips. *Forced vegetables*: asparagus, beans, cucumbers, rhubarb.

MARIGOLD.—Of this flower there are several varieties, but the mode of culture is common to all. The soil should be light



dry, poor, and unshaded. Sow any time from the close of February until June, or in autumn during September. For a seed-bed four feet by four, sown in drills one foot asunder, a quarter of an ounce will suffice. When the plants are two or three inches high, thin them to about twelve or fifteen inches asunder, or transplant them at the same distance. They will grow freely either way, and come into flower the following May or June, and continue flowering in plentiful succession throughout summer and autumn, to be cut for use as wanted. A store for winter should be gathered when in full flower, spread out to dry in the sun, and afterwards put into paper bags. A distilled water, a kind of vinegar, and a conserve are made from the flowers. It is occasionally used in broths and soups, partly to give them a colour, and partly to impart the peculiar flavour and warm aromatic taste which belongs to the flower.

MARJORAM.—Of the different kinds of this plant, the sweet evergreen is propagated solely by seeds; the others by seed, as well as by parting their roots, and slips of their branches. Sow from the end of February, if open weather, to the commencement of June, but the early part of April is best. Portions of the rooted plants, slips, &c., may be planted from February until May, and during September and October sow in drills six inches apart, the seed being buried not more than a quarter of an inch deep. When the seedlings are two or three inches high, thin to six inches, and those removed may be

pricked in rows at a similar distance. Those of the annual species are to remain; but those of the perennials to be finally removed during September, water being given at every removal, and until the plants are established. Plant slips, &c., in rows ten or twelve inches apart, where they are to remain; they must be watered moderately every evening and shaded during the day, until they have taken root. In October the decayed parts of the perennials are cut away, and some soil from the alleys scattered over the beds about half an inch in depth, the surface of the earth between the stools being previously stirred gently. The tops and leaves of all the species are gathered when green, in summer and autumn, for use in soups, &c.; and a store of the branches are cut and dried in July or August, just before the flowers open, for winter's supply. To obtain the seed, a plant or two of the pot-marjoram should be left ungathered, and the seed will ripen in the course of autumn. When the green tops of this plant are much in request they may be forced, by sowing a small quantity of the seed of summer marjoram in a moderate hotbed, in the months of January and February.

MARKETING.—The process of properly providing provisions and other necessary articles for a household, may be said to elevate itself almost into an art, by the practice of which, an income may be considerably economized, and at the same time a greater amount of satisfaction afforded to all parties concerned. The chief thing which conduces to good marketing is, as a matter of course, the possession of means by which it can be achieved, for, with ready money a person may not only buy better articles, but obtain them at some ten or fifteen per cent. cheaper than the person who goes to market on credit. The person who pays ready money is free to go to any shop she pleases, in the event of not being well served, and the fact is so obvious to the tradesman that he considers it a wise policy to pay particular attention to the wishes of his ready-money customers. When persons go marketing, they should not trust to memory for the articles they require, but put them down in a little book, or on paper; and previously to setting out they should ascertain whether or not a fresh supply is wanted of the ordinary articles of consumption. Persons should be especially warned not to make a practice of buying low-priced commodities, for, whether these are in the shape of provisions, or for household use, they almost invariably turn out unsatisfactory, and the value of the parts wasted, or compelled to be thrown away as unfit for use, far exceeds the imaginary saving attending the lowness of price. In purchasing articles of consumption, as meat, fish, vegetables, it is of the utmost importance that they should be tender, sweet, and fresh. Whether they are so or not, may be readily ascertained by paying attention to the indications which articles of food in their fit or unfit state always give. To assist this knowledge this work furnishes the external appearance and condition of the various articles of consumption when treating of

them. Another useful piece of knowledge is that some classes of provisions are more economical than others. In the different joints of meat this is especially the case; the inexperienced housewife, therefore, should study this essential point, as she will find it of the greatest service. Tradesmen generally have a way of endeavouring to persuade persons to buy certain articles which it is to their interest to sell, but not to the interest of the purchaser to buy. In such cases, housewives should cut short the tradesman's ill-bestowed eloquence by at once declaring that those articles will not suit her. When the shopkeeper discovers, by the mode of meeting him, that the purchaser knows what she is about, he will not again endeavour to force his refuse upon his acute customer. Of the kinds of articles which improve by keeping, it is as well, where the money can be spared, to lay in a supply which will last for some time. The same plan applies to articles in which there is a periodical and almost certain rise in the prices; for by thus anticipating the market, a considerable saving may be of course effected. Many housewives remain in ignorance all their lives of the principles of economical and judicious marketing, simply because they will not inform themselves of the rules by which this useful knowledge may be attained. This either arises from indifference or from a false shame in letting other people see that a certain amount of inexperience exists, which the most notable housekeeper of after-life must have displayed when young. Beginners, therefore, should not hesitate to ask for information of their older or more experienced friends, and adding to their store of information little by little, attain at length a perfect knowledge of how to go to market.


MARKING INK.—This ink may be made after a variety of methods; the following is one of the best: dissolve separately an ounce of nitrate of silver, and an ounce and a half of carbonate of soda, in distilled or rain water. Mix the solutions, and collect and wash the precipitate in a filter, whilst still moist; rub it up in a marble or wedgewood mortar, with three drachms of tartaric acid; add two ounces of distilled water, mix six drachms of white sugar, and ten drachms of powdered gum arabic, half an ounce of archil and water to make up six ounces in measure. Apply with a clean quill pen. *Red marking-ink* may be compounded thus: take half an ounce of vermillion, and a drachm of salt of steel; let them be finely levigated with linseed oil, to the thickness or limpidity required for the occasion. The ink thus obtained has not only an attractive appearance, but will be found perfectly to resist the action of acids, as well as of all alkaline lyes; it may be employed with either a hair-pencil or a pen. *Marking ink may be removed from linen* by a saturated solution of cyanuret of potassium, applied with a camel's-hair brush. After the marking-ink has disappeared the part should be well washed in cold water.

MARKING, VARIOUS ARTICLES.—It is of essential importance that both wearing

apparel, and all articles of domestic use should be marked and numbered. By this means the absence of articles may be always detected, and their use by a certain rotation insured. The marking should be performed with a fine new quill pen, and the articles laid before the fire to dry as they are severally marked. It is better to mark with ink, as the marks are then less easily obliterated; as, however, some persons prefer to mark with silk, it is performed as follows: two threads are to be taken each way of the fabric, and the needle must be passed three ways in order that the stitch may be complete. The first is asslant from the person, towards the right hand; the second is downward towards the person; and the third is the reverse of the first—that is, asslant from you towards the left hand. The needle is to be brought out at the corner of the stitch nearest to that you are about to make. The shape of the letters and figures may be learned from an inspection of any common sampler.

MARL, AGRICULTURAL USES OF.—Marl contains certain chemical properties, which render it an excellent fertilizer. One essential point is to determine the qualities of the different earths and stones to which marl is to be applied, and to ascertain the quantity of calcareous earth in their composition, their value in agriculture commonly increasing in proportion to the greater quantity of it which they contain. The following process will be found the best for this purpose: the marl being dried and reduced to powder, put half an ounce of it into a half-pint glass, pouring in clear water till the glass is half full; then gradually add a small quantity of strong marine acid (spirit of salt), and stir the mixture well together. As soon as the effervescence thus excited subsides, add a little more marine acid, thus continuing the operation while any of the earthy matter appears to dissolve, and till the liquor, after being well stirred and allowed to stand for half an hour, appears sensibly acid to the taste. When the mixture has subsided, if the liquor above it be colourless, that marl will be found the best which leaves the least sediment or deposit in the bottom of the glass. This experiment is sufficient to determine which of the samples tried is the most proper for the uses of agriculture, as pure calcareous earth or lime, which is the earth useful in agriculture, will be entirely dissolved, but clay or sand will not be sensibly acted upon by the acid.

MARLBOROUGH PUDDING.—Take four ounces of butter, melted; four ounces of loaf sugar, finely powdered; and four eggs well beaten; mix all well together. Line a dish with puff paste and a layer of preserves; add the batter, and bake it for an hour.

 Butter, melted, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; eggs, 4.

MARMALADE.—See APPLE, APRICOT, CURRANT, LEMON, ORANGE, PEARS, &c.

MARMALADE, TRANSPARENT.—Take very pale Seville oranges, cut them in quarters, take out the pulp, and put the fruit

into a basin; pick the seeds and skins out; put the peels in a little salt and water; let them stand all night; then boil them in a large quantity of spring water till they are tender; then cut them in very thin slices, and add them to the pulp. To every pound of marmalade put a pound and a half of double-refined sugar beaten fine. Boil gently for twenty minutes; if it is not then clear and transparent, boil it for five or six minutes longer; continue stirring it all the time, and take care not to break the slices; when it is cold, put it into jelly-glasses, and tie them down with branded papers over them.

MARRIAGE.—The lawful conjunction of man and wife. Marriage, to be lawful, must comply with certain ecclesiastical laws; and if celebrated in contravention of these laws, it is not a valid contract, and may be, under special conditions, dissolved. Thus, marriages cannot be solemnized between persons within the Levitical degrees; but if so solemnized, they are not void until after the sentence of the proper court. Marriages by licence, where the parties are not of age, must not be without the consent of the father or guardian, and may be annulled. If the guardian or parent is beyond sea, or insane, the Lord Chancellor will proceed upon relation in their stead. On the other hand, many marriages which are seemingly illegal, are in reality not so. Thus a person being married in an assumed name, is just as legally married as though he had been married in his true name. A marriage between a Roman Catholic and a Protestant need not necessarily be solemnized in a place of worship dedicated to each religion, but if the ceremony be performed in either place of worship only, the marriage is perfectly legal. Some misapprehension appears to exist respecting the right of a married person, whose husband or wife is absent, to re-marry, provided the parties have not been heard of for seven years. The fact is, that the law excuses a second marriage under such circumstances, but it does not legalise it. So, if a woman already married to a husband who had been away from her for seven years, and from whom she had not heard during that time, were to return after the second marriage was contracted, he would still be the woman's lawful husband, the second marriage would be null and void, and any issue of such union would be illegitimate. A marriage celebrated with a lunatic is illegal, and may be dissolved, because a lunatic is considered to be irresponsible for his actions, and therefore disabled from entering into any contract whatever. Marriage is dissolved by death. The dead wife was a wife, but is a wife no longer; consequently all relationships subsisting during the wife's lifetime on account of that marriage, are dissolved by the wife's death; therefore, a man who was a person's brother-in-law whilst the wife lived, is brother-in-law no longer when she is dead; but he is called by courtesy brother-in-law, and his children by the sister are by blood related to the brother. His children by another wife are not related

at all.—See AFFINITY, BREACH OF PROMISE, &c.

MARRIAGE BY REGISTRATION.—By this mode marriage may be celebrated without the publicity of banns, and unattended by the expense attached to licence. The manner of proceeding is to give notice of your intention to the registrar of the district, and at the end of twenty-one days, that functionary will give you a certificate, which the officiating clergyman will receive as equivalent to the licence or banns. Under these circumstances, the marriage fees will amount to twelve or fourteen shillings, exclusive of any gratuity you may choose to make to the parish clerk, sexton, pew-opener, &c.

MARRIAGE LICENCE.—Marriage by an ordinary licence must be solemnized in the church of the parish where one or other of the parties resides. The licence must be taken out for the place where the marriage is to be solemnized. It may be taken out by any person who can make oath that both parties are of full age, and have the consent of parents or guardians if not of age. A special licence permits persons to be married at any licensed place not named. By one of the canons of the church, a clergyman is to marry only between the hours of eight and twelve in the forenoon. Marriage by licence is distinguished from other modes, as being more "fashionable" and select.—See BANNS OF MARRIAGE.


MARRIED WOMAN, LEGAL POSITION OF.—When a woman becomes married, her individuality, in a legal point of view, becomes merged in that of her husband. She is relieved of the responsibility, and indeed disabled from performing any contract, or effecting any act as a sole and independent person. She is, also, to a certain extent, absolved from moral responsibility, provided she act under the direction of her husband. A married woman, except under certain conditions, cannot exercise a separate and independent control over monies, houses, lands or other possessions, it being held in law that those which belong to her belong by a still stronger claim to her husband. If a married woman purchases stock, the Bank of England will not permit her to take the dividend, or sell the stock. Married women cannot grant leases, unless the power is expressly reserved them by marriage settlement. Nor can married women, except by special custom, take leases. A married woman who is deserted by her husband, or living apart from him by mutual consent, is entitled to a certain allowance from him, according to his means; and in the event of his refusing to contribute to the support of his wife, he may be sued by persons who have supplied her with goods, or have maintained her and given her a lodging. It has been ruled, however, that in cases of goods supplied, the cost must not be excessive and disproportionate to the husband's income and position in life. By a recently introduced law, a married woman may be judicially separated from her husband by reason of infidelity, cruelty, and desertion,

under aggravated circumstances. Police magistrates have also the power of granting protection to the property and possessions of married women, who have been deserted without any means of support, and who are in fear of the husband returning to appropriate to himself the goods, monies, and effects upon which she depends for her subsistence.—See ALIMONY, SEPARATION JUDICIAL, &c.

MARROW.—The fatty matter which fills up the centre of the shaft of the long bones. As an article of diet, it possesses the same nutrient properties as the fat generally. *To preserve clarified marrow,* take the marrow from the bones while it is perfectly fresh, cut it small, put it into a perfectly clean jar, and melt it with a gentle heat, either in a pan of water placed over the fire, or at the mouth of a cool oven; strain it through muslin, let it settle for a minute or two, and pour it, clear of sediment, into small jars. Tie skins or double folds of thick paper over them as soon as the marrow is cold, and store it in a dry and cool place; it will remain good for months.

MARROW BONES.—Put a bit of paste made with flour and water over the end where the marrow is visible; tie a cloth tightly over them and boil them for two hours; take the paste off before the bones are sent to table, and serve them on slices of dry toast.

MARROW PUDDING.—Grate a penny loaf into crumbs, pour on it a pint of boiling cream. Cut very thin a pound of beef marrow, beat four eggs well, add a wineglassful of brandy, with sugar and nutmeg to taste. Mix all well together, and either boil or bake it for three-quarters of an hour. Cut two ounces of candied citron very thin, and when served up, stick the pieces all over it.

 Bread, a penny loaf; cream, 1 pint; beef marrow, 1lb.; eggs, 4; brandy, 1 wineglassful; sugar and nutmeg to taste.

MARSH MALLOW.—A plant found frequently in England near the sea; it bears pale bluish red flowers on an upright stem; the leaves are heart-shaped, cut at the edges, and, like the stem, are covered with soft, hairy down. The whole plant is mucilaginous, but the root is chiefly used. It is used for the same purposes as the linseed, and drunk in similar quantities. The decoction is made by boiling four ounces of the dried root with two ounces of raisins in six pints of water, until the whole is reduced one-third, and straining the liquid through calico before use. The marsh mallow is also used externally, both as a fomentation and a poultice in inflammatory cases, and it is also employed as an emollient.

MARTEN.—A bird of the swallow tribe, chiefly remarkable for building beneath the windows of houses. The peculiar habits of this bird, and the absence of song, does not render it suitable for cage confinement. The damage done to buildings by this bird building its nest is sometimes very considerable.

and if it is desired to prevent their building, rubbing the places usually selected by



them, with oil or soft soap, will be found effectual.

MARVEL OF PERU.—A greenhouse herbaceous perennial. It is propagated by seeds sown in a hotbed, in spring, and the plants are hardened off by degrees to stand in the open border. The roots are taken up and preserved in sand or dry moss during the winter; this plant flourishes best in a rich sandy loam, its general culture is much the same as that of the dahlia.

MASTER AND SERVANT.—The mode of hiring is by what is commonly called a month's warning or a month's wages. But this arrangement varies considerably, and is regulated for the most part according to the customs of the particular branch of service or employment. A grocer or linendraper in the metropolis, may, by the custom of the trade, discharge an assistant without any notice. Here the bargain in the outset is for so much salary per year. An usher engaged in much the same way, is entitled to a quarter's notice. A parliamentary reporter is engaged for the session of Parliament. An editor is sometimes dismissed with a month's notice, but mostly three months' notice from any day. In every trade or calling, in the absence of any stipulation upon the point, the Courts hold that the customary notice is understood by master and servant. If a master would require, or has required a monthly notice from his clerk, the clerk is entitled to the same from his master. Where a mercantile house has fifty or sixty assistants, the custom of the particular house, and not of the trade, will prevail. If a servant be disabled in his master's service, by an injury received through another's default, the master may recover damage for loss of service. If a domestic servant falls ill, a master is not bound to provide medical attendance and medicines, yet if he calls in his own medical attendant, and pays for such attendance, he cannot set off the amount against the servant's claim for wages, unless there was a special agreement between them that he

should do so. If a servant hired by the year, meets with an accident or is disabled while employed in his master's business, he cannot be lawfully dismissed, nor can his wages be abated. If a servant wilfully disobeys any lawful order of his master, he is liable to be discharged immediately, without either notice or compensation. A master may not only maintain an action against any one who entices away his servant, but also against the servant; and if without enticement, a servant leaves his master without just cause, an action will lie against another who retains him with a knowledge of such departure. In cases where a person hires a servant already engaged to another, although the person hiring is not aware of any existing engagement, the original master may claim the services of his servant, and the second hiring is null and void. A master is entitled to correct his servant in a reasonable manner, to enforce fidelity and obedience to all his lawful commands. Acts of the servant are, in many instances, deemed acts of the master; and he is responsible for them where they are pursuant to his authority. If a servant commit an act of trespass by command or encouragement of his master, the master may be held liable. But in so doing, his servant is not excused, as he is bound to obey the master in such things only as are honest and lawful. If a servant of an innkeeper rob his master's guest, the master is bound to make good the loss. Also, if a waiter at an inn serve a person bad wine, by which the health of the person is impaired, an action will lie against the master. In like manner, if a servant be permitted to frequently do a thing by the tacit consent of his master, the master will be liable. If a servant is usually sent upon trust with any tradesman, and he takes goods in the name of his master, and appropriates them to his own use, the master must pay for them. But if a person usually deals with a tradesman himself, or constantly pays them ready money, he is not answerable for goods supplied on credit to the servant in his name. Or if a person forbid a tradesman to trust his servant on his account, and the servant continue to purchase on credit, the master is not liable. The act of a servant, though he has quitted his master's service, has been held to be binding on the master, by reason of the former credit given him on his master's account, and the fact of the servant's discharge not being known to the party trusting. The master is also answerable for any injury arising by the fault or neglect of his servant when executing his master's business. A master is likewise chargeable for any nuisance occasioned by his servant, to the damage or annoyance of any individual, or the common nuisance of Her Majesty's subjects. A servant is not answerable to his master for any loss which may happen, unless it be through wilful neglect; but if he be guilty of fraud or of gross negligence, an action will lie against him by his master. When servants are drawn for the militia, the position of the parties appears to be this:—If the servant return to his employ

within a reasonable time after training, the master is bound to receive him, subject to the right of deducting such a sum from his wages as is proportioned to the duration of absence. If he refuse to receive him, the servant may either treat the service as continuing, and wait for his wages until the end of the year, or other period agreed upon; or he may treat the service as ended by mutual consent, and at once recover so much wages as is proportioned to the time he served before he went out training. If a servant stipulate to remain for a certain period in his master's service, and he discharges him before the expiration of that period, he is not entitled to recover any wages for the portion of time that he has remained.

MASTER AND SERVANT, MUTUAL OBLIGATIONS OF.—It is universally admitted that a good master makes a good servant; and one of the best signs of a proper understanding existing between the employer and the employed is furnished by servants remaining for a lengthened period in the same situations. A master should treat his servant with firmness but not with severity; he should lead his servant to understand that when he once ordered anything to be done, he expected it to be promptly and properly obeyed, without being compelled to reiterate the order. A master should observe habits of regularity in his own proceedings, and thus set an example to those under him, which they are almost sure to follow. A servant should be paid at a fair and just rate for his services; no saving is in reality effected by underpayment; it sometimes makes servants dishonest, and always renders them careless and negligent. As length of service increases, and when the servant has conducted himself well, an occasional augmentation of wages will not be ill-bestowed; or the recognition of fidelity and good service may take the form of some periodical and seasonable gift. A master may advantageously drop occasionally the character of the employer for that of the friend, giving good advice on personal matters, and making inquiries in connection with their welfare; but on doing this, anything approaching to familiarity should be avoided, nor should such intercourse partake of an inquisitorial character. Servants should never be reproved before strangers; whatever faults they commit should be censured privately; the reproof will then have all the greater force, and the manner of giving it will be appreciated by every sensible servant. A master should carefully avoid commissioning his servant in questionable offices, as, for instance, inducing him to tell a falsehood, or ordering him to commit some mean act by which a petty advantage may be gained. By such a course of conduct all moral restraint will be lost, and the servant will in all probability avail himself of similar acts against his master's interest. Family quarrels and disputes with any member of the household should never be carried on in the presence of a servant; such displays have a tendency to lessen the parties in the eyes of the servant, and encourage acts of insubordination. No master should make a con-

fidant of his servant, or intrust him with any secret to his prejudice; this at once gives a servant undue importance, and leads him to take liberties which he would not otherwise dare to contemplate. Some allowance should be made for the feelings and sufferings of a servant; thus, when he is overtaken by illness, or visited with affliction, he should be treated with merciful consideration; such a concession is never thrown away, for should the employer subsequently share a similar fate, he will find in his servant a sincere sympathizer and a watchful attendant. Servants should be indulged in occasional holidays and hours of relaxation; under these conditions, labour will be performed with more alacrity and greater interest.

The duties of a servant towards his employer may be summed up as follows: He should implicitly obey the orders given him, without murmur or dissent. He should also endeavour to gain a knowledge of his employer's habits, and anticipate his wishes, so as to spare the necessity of being continually reminded of duties which he is sure to be called upon to perform. A servant should avoid giving himself airs of consequence, or acting or speaking impertinently; such conduct only serves to display his ignorance, and an unfitness for the situation he holds. All duties should be performed as conscientiously in the employer's absence as in his presence; eye-service is a species of hypocrisy which must be sooner or later detected, with very humiliating consequences. A servant should act with the same zeal and probity on his employer's behalf as he would for his own; any petty advantage gained by an opposite course is more than counterbalanced by the guilty consciousness of wrong, and may be attended by an irretrievable loss of character. Whatever is done or said by the members of a family, which may be repeated to their prejudice, should never be carried beyond the walls of the house; a servant who circulates gossip and scandal respecting the household in which he lives, is unworthy of his trust, and brands himself as a domestic spy and a traitor. Harsh expressions and hasty words, occasionally addressed by an employer to his servant, should be overlooked instead of being resented. This is sometimes difficult of observance, but it never fails to be appreciated, and will invariably win respect and esteem. A servant should always be true to his promise; thus, when he is permitted leave of absence on condition that he return at a stated time, he should be back at his post to the minute; any extra liberty taken beyond that stipulated for is calculated to irritate an employer, and by shaking his confidence, renders him reluctant to grant a like indulgence on a future occasion. Truthfulness and straightforward conduct should be ever observed; when a servant has committed an error, or has met with some mishap in the performance of his duties, he should not endeavour to screen himself by subterfuge and misrepresentation, but at once acknowledge the fault he has committed, or reveal the acci-

dent that has befallen him. A servant should be cheerful and willing, and content with the station which has been assigned him; he should remember that there must of necessity be some grades in life lower than others; and, in order that he may reconcile himself to this order of things, he should contrast his lot with that of thousands who are much worse situated than himself; and find comfort in the fact that he is spared the responsibilities and vexations which attach themselves to the higher spheres of society.

MASTIFF.—A variety of dog, having a large and powerful frame, and with a somewhat savage and sullen aspect. He has a large



flat head, and a short blunted muzzle; his lips are full, and hanging considerably over the lower jaw; his ears, although rather small, are pendulous. This dog is remarkable for his courage, watchfulness, and fidelity; he is gentle with those with whom he is familiar, ferocious towards strangers and intruders, and refuses to be either bribed or coaxed from what he considers his duty. In short, this dog is a faithful and trusty servant, when property is at stake, or the person is likely to be threatened; thus, as a companion to persons travelling on a lonesome and perilous journey, or as a guard for a house in retired situations, the mastiff is invaluable.

MAT.—An article of domestic use employed for the purpose of protecting tables, carpets, floorcloth, &c. Table-mats are usually made of wicker-work or of oiled cloth, of various sizes, according to the dimensions of the dishes which they are to be placed beneath. By thus interposing the mat between the heated dishes and the table, the former are prevented from doing injury to the latter. These articles are inexpensive, and will last a long time. Mats placed at the entrance of passages, rooms, &c., hold an important place in domestic economy, by preventing dirt from being brought into the house or the apartments; so that the place is not only kept clean, but by rendering frequent sweeping of the carpet less necessary, does not cause it to wear

out so soon. The mats placed at outer doors and passages are usually made of rope; these should be cleaned every morning by beating them against a wall, and then by placing the upper side downwards, and striking the dust out with a broom. Mats placed at the entrances of rooms are usually made of finer materials, and may be contrived out of cloth and worsted remnants, &c. A mat for use in rooms, which is at once ornamental and comfortable, may be made from sheepskins, as follows: Dissolve a pound of alum and a pound of salt in a gallon of water. Put the skin in soon after it is taken from the sheep, and let it soak for twenty-four hours. Then nail it on an old door or other surface, skin uppermost, till quite dry. Cut it into shape, and line it with a piece of old carpet, to prevent it greasing the floor. A new species of mat, made of cocoa-nut fibre, has been recently introduced, which is found to be very serviceable, and to wear well.

MATHEMATICS.—Books: *Orr's Circle of the Sciences (Mathematics)*, 4s. 6d.; *Young's Mathematics*, 2s.; *Ingram's Concise System*, 7s. 6d.; *Trotter's Mathematics*, 3s.; *Goodwin's Problems to Mathematics*, 6s.; *Quested's Mathematics*, 2s. 6d.; *Hutton's Mathematics*, 2 vols. 24s.; *Christie's Elements*, 2 vols. 31s.; *Davidson's Mathematics*, 10s. 6d.; *Hutton's Recreations in Mathematics*, 16s.; *Kelland's Lectures on Mathematics*, 4s. 6d.; *Gregory's Mathematics for Practical Men*, 21s.; *Davies' Solutions*, 24s.; *Rutherford's Mathematician*, 21s.; *Mathematician's Guide*, 1s.; *Practical Mathematics*, 6s. 6d.

MATRIMONY.—A game of cards played with the entire pack, by any number of persons from five to fourteen. It consists of five chances, usually marked on a board, or sheet of paper, as follows:—

Best
The Ace of Diamonds turned up.

Confederacy
King and Knave.

<p>Intrigue or Queen and Knave.</p>

Matrimony
King and Queen.

The highest
Pairs

The game is generally played with counters; the dealer lays any stake he pleases on each or any chance, the other players depositing each the same amount, except one; that is, when the dealer stakes twelve, the rest of the players lay down eleven each. After this, two cards are dealt to every one, beginning on the left; then to each person one other card, which is turned up, and he who happens to have the ace of diamonds, sweeps the board. If it be not turned up, then each player shows his hand; and any one having matrimony, intrigue, &c., takes the counters on that point; and when two or more players happen to have a similar combination, the eldest hand has the preference; and should any chance not be

gained, it stands over to the next deal. *Observe:* The ace of diamonds turned up takes the whole pool, but when in hand ranks only as any other ace; and, if not, turned up, nor any ace in hand, then the king, or next superior card, wins the chance styled best.

MATTOCK.—An agricultural implement consisting of two parts; the handle, which ought to be formed of sound ash timber or oak, such as is obtained from the root or butt end of a middle-aged tree; and the head, which should be formed of the best iron and pointed with steel. The handle ought to be perfectly cylindrical, as in using it, one hand slides along it from the end next the operator towards the head. This implement is also known by the name of pick.

MATTRESS.—An article of bedding sometimes placed between the bedstead and the bed, and sometimes employed as a bed itself. Mattresses are made of various materials, according to the particular use to which they are to be put. Down and feathers are the materials best adapted for the aged and the young, wool and hair for the middle-aged and the robust. And in hot climates, or for persons who perspire very freely, mattresses made of aloe, manna, and paper shavings are the best. Wool mattresses, when well made, are exceedingly healthy and pleasant to lie upon, and they may be rendered still more yielding and agreeable by placing a spring mattress beneath. Mattresses require a periodical beating and cleaning, and should be occasionally exposed to the action of the air so as to render them wholesome, and to free them from any insects or vermin with which they may be infested.

MAY, GARDENING FOR.—*Kitchen garden.*—*Beans*, sow in cool situations. *Beet*, continue to sow in rows, as for carrots. *Brocoli*, continue sowing a little more seed of the later sorts, including Grange's white, Walcheren, and early Cape. *Cabbages*, transplant the spring-sown sort eighteen inches apart every way; make a succession sowing for late autumn use. *Capsicums*, plant out against a south wall, if the weather prove fine. *Cardoons*, sow a full crop in a trench similar to a celery trench, put in decayed manure, and sow ten inches deep. Keep the plants freely growing by frequent application of liquid manure. *Carrots*, thin, as they are large enough. *Cauliflowers*, plant from seed-beds, *Endive*, sow a little seed for early autumn; green curled is the best for the present season. *Kidney beans*, continue to plant for general crop, three or four inches apart, and two feet, row from row. *Lettuces*, transplant some of the strongest, and sow a little for succession. *Melons*, attend with constant care, and regulate the number of fruit. *Peas*, continue to sow for succession some of the best late sorts, British queens, Knights' marrow, and any of the late tall sorts of marrows. *Radishes*, continue to sow for succession; when wanted the turnip radishes succeed best now. *Scarlet runners*, sow for a general crop the first week in the month.

Sea-kale, remove the fermenting material from such as are required for next year's supply. *Spinach*, sow once a fortnight if much be required. *Turnips*, hoe and thin such as are fit, and make a fresh sowing. *Vegetable marrow*, plant out towards the end of the month, on a rich light soil.

Flower garden.—*Annuals*, pot out the tenderest sorts, and of the hardy kinds sow another succession, and transplant some of those sown in former months. *Asters*, thin superabundant. *Auricula*, remove to north-east aspect. *Bulbous roots*, take up as the leaves decay. *Carnations*, sow. *China roses*, propagate by cuttings. *Chrysanthemums*, protect from the cold and the east winds. *Dahlias*, protect from cold by covering with mats. *Heart's ease*, of the best varieties, place in shady situations. *Larkspurs*, plant out. *Mignonette*, plant out. *Neapolitan violets*, place in beds of manured loam. *Parterres*, plant with groups of fuchsias, calceolaria, Petunia, verbenas; and form masses of scarlet and variegated gerania. *Peruvian heliotrope*, propagate by the division of the roots. *Ranunculus*, plant to flower in autumn. *Rose-trees*, prune back to obtain a late bloom. *Stocks*, transplant in pots for winter. *Tulip-beds*, protect from mid-day sun, rain, winds, &c. *Violets*, make new beds of. *Wall-flowers*, propagate by slips.

General remarks.—This is one of the most eventful months of the year, and constant attention is needed to encourage the development of the various plants, and to keep down noxious agents, as weeds, insects, &c. The routine culture consists of hoeing, raking, weeding, and clearing the ground. Whenever rain has battered the ground, it should be stirred up and refreshed as soon as it is nearly dry. Stir the surface around close patches of annuals, and refresh and top-dress all pots of prolonged annuals, now in full flower or in seed. Destroy insects and pick the grubs off roots. Detach seed-pots from all plants not required to ripen seeds. Water, thin, and shade with judgment, and keep a vigilant eye to order and neatness. Nearly all seeds which have been sown under the protection of frames may now be finally transplanted into their respective quarters, and no time should be lost to get the ground covered and cropped. Keep always a reserve stock of the various tribes of brassica ready for transplanting as vacancies occur; keep down weeds, and on no account allow any to run to seed; it ought to be remembered, that it is easier to kill weeds when they are young; and, independently of this, the crops will be much benefited by frequent hoeings and surface-stirrings. Be careful to thin young crops of all sorts; the first operation should be performed early, and another may be required when the plants are more advanced. All plants, when allowed to remain thick, run up tall and slender, and seldom succeed well.

MAY, THINGS IN SEASON.—*Fish*.—Brill, carp, chub, cod, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnets, haddock, halibut, herring, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns.

salmon, shrimps, skate, smelt, soles, sturgeon, tench, trout, turbot, whittings.


Fruit.—Apples—John apple, golden russet, winter russet. May-duke cherries, currants, gooseberries, melons. *Pears*—L'Ainozette, winter green. *Forced*—Apricots, cherries, nutmeg peaches, strawberries.

Meat.—Beef, grass-lamb, house-lamb, mutton, pork, veal.

Poultry and Game.—Chickens, ducklings, fowls, green geese, leverets, pigeons, pullets, rabbits, wood-pigeons.

Vegetables.—Angelica, artichoke, asparagus, balm, beans, cabbage, carrots, cauliflowers, chervil, cucumbers, fennel, herbs of all sorts, lettuce, mint, onions, parsley, peas, potatoes (new), purslane, radishes, rhubarb, salad of all sorts, sea kale, sorrel, spinach, thyme, turnips.

MAYONNAISE.—A sauce for cold meat, poultry, fish, &c., made as follows:—Put into a large basin the yolks of two new laid eggs, with a little salt and cayenne; stir these well together, then add a teaspoonful of good salad oil, and work the mixture round until it appears like cream. Pour in by slow degrees nearly half a pint of oil, continuing at each interval to work the sauce as at first, until it resumes the smoothness of cream, and not a particle of the oil remains visible; then add two tablespoonfuls of tarragon vinegar, and one tablespoonful of cold water to whiten the sauce.

 Eggs, 2 yolks; salt, $\frac{1}{4}$ saltspoonful; cayenne, 1-10th saltspoonful; oil, $\frac{1}{4}$ pint; tarragon vinegar, 2 tablespoonfuls; cold water, 1 tablespoonful.

MEAD.—A liquor made chiefly from honey, according to various methods, of which the following are a selection:—1. To every gallon of water put four pounds of honey, and boil for three-quarters of an hour, skimming it well in the meantime. To every gallon of this liquor add an ounce of hops, then boil for half an hour, and let it stand till the following day, when it is to be put into the cask, and to every thirteen gallons of the liquor, add a quart of brandy. Let it be tightly stopped till the fermentation is over, and then bung it very close. If a large cask be made, a year should elapse before bottling; for smaller casks, the time to be proportioned accordingly. 2. Mix well the whites of six eggs in twelve gallons of water; and to this mixture, when it has boiled for half an hour, and has been thoroughly skimmed, add thirty-six pounds of the finest honey with the rinds of two dozen lemons. Let them boil together for some little time, and on the liquor becoming sufficiently cool, work it with a little ale yeast. Put it with the lemon-peel into a seasoned barrel, which must be filled up as it flows over with some of the reserved liquor; when the hissing noise made by the liquor ceases, drive the bung close. After the wine has stood for five or six months, bottle it for use. 3. Boil fourteen pounds of honey in six gallons of water for half an hour, breaking into it four eggs; then add some small bunches of marjoram, balm, and sweetbriar; half an ounce each of cinna-

mon, cloves, mace, and bruised ginger, and boil for a quarter of an hour longer; pour it out to cool, then toast a large slice of brown bread, spread it over with fresh yeast, and put it into the liquor; let it ferment for a day, then turn it into the cask, keep it open till the fermentation has ceased, then bung close. It may be bottled in a month, and the corks should be securely tied or wired, as mead thus made is sparkling and effervescent.

MEADOW.—Under this term is included all such land as is kept under grass chiefly for the sake of a hay crop. The most valuable meadows are such as are either naturally moist, or are rendered so by means of irrigation. There are three descriptions of these meadows—those on the banks of streams and rivers; those on the uplands or more elevated grounds; and hog-meadows. River meadows are in general by far the most valuable. They are the most productive of grass and hay, yielding sustenance for cattle through the summer and the winter, and producing a constant source of manure for the improvement of the adjoining lands. The principal defects to which such lands are liable are, the oozing out of springs towards their junction with the rising lands, and the inundations of the river or stream. The former evil is to be remedied by under-draining, and the latter by embanking. Upland meadows are next in value. The soil is either naturally good and well adapted for grass, or, if inferior by nature, it is so situated as to admit of enrichment by ample supplies of manure. The culture of upland meadows requires more attention, and entails more expense than that of valleys, being more difficult to drain, and requiring regular supplies of manure. The irregular surface of uplands is apt either to contain springs, or to stagnate the surface water; the first produce marsh plants and coarse herbage, and the latter destroys or weakens whatever is growing on the surface, and encourages the growth of moss. Both evils are to be remedied by the obvious resources of drainage. Bog-meadows are the least valuable of any; but their culture and management differ in nothing essential from those of the river kinds. A lighter roller is used in spring, the greatest care is taken in eating down the latter grass, and in some cases, in very dry weather, the main drains are stopped up for a few weeks, in order to stagnate the water, and supply the soil with moisture.

MEALS, NUMBER AND TIMES OF TAKING.—The average number of waking hours is sixteen out of the twenty-four. The time required to digest food is in general from four to five hours, so that meals are required to be taken at these intervals to supply the necessary repair to the system. The arrangement of meals, therefore, is commonly as follows:—Breakfast, eight o'clock; dinner, one o'clock; tea, five o'clock; supper, nine o'clock. This may be deemed the most rational distribution, and in accordance with the ordinary pursuits of life; although peculiar avocations, and certain customs, may dictate a different method. Exceptions

must also be made in favour of delicate persons and young children, the times for meals for the former being those which they find best to agree with them; while with the latter the interval should rarely exceed three hours and a half or four hours, as their digestion is quicker than that of adults. Whatever hours are fixed upon for taking meals in the first instance, should be consistently maintained afterwards. Habit exercises the greatest influence in the matter, and the person who has been in the practice of taking food at a certain hour of the day, will always, whilst in good health, feel hungry at that hour. Indeed, it sometimes happens that the stomach will work only at those hours to which its operations have been long accustomed; and infirmity may be frequently traced to a change in the hour of taking a meal. In cases where the interval between meals is as above mentioned, eating and drinking should not be carried on except at those meals; it is not only unnecessary, but disturbs the stomach, and interferes with the regular process of digestion. When the interval is longer than that named, as, for instance, where a person breakfasts at eight o'clock, and does not dine till four, a slight intermediate repast is admissible, but the food should be of the most simple nature, and the drink as little stimulating as possible. With persons engaged in sedentary occupations during the chief part of the day, it is certainly wiser that the principal meal should be delayed until the work is done, or a long interval of rest may be indulged in. Supposing persons thus circumstanced to breakfast at eight o'clock, a biscuit or other light food may be partaken of at twelve or one o'clock, and dinner at four or five. Persons should not partake of their meals alone when it can be avoided; under such circumstances, the mind is apt to busy itself with deep and anxious thought, and the body, sympathizing with the mental disturbance, is liable to suffer from the interruption caused to the digestive organs. The habit of eating to repletion at various meals should be avoided, for by this pernicious practice the system receives far more injury than it derives benefit, and the plan should be to rise from the table with a feeling of moderate gratification rather than satiety.—See BREAKFAST, DINNER, SUPPER, TEA.

MEASLES.—This is a disease characterized by a species of inflammatory fever, attended with all the symptoms of a severe cold, running at the nose and eyes, sneezing, cough, cold chills, tightness at the chest, languor, lassitude, pain in the back and head, and in fact by all the indications of constitutional disturbance and fever; though the sign by which it may be most readily known and determined, is the running of humour from the eyes, and constriction at the chest, with a short dry cough. The great secret in the treatment of measles to be borne in mind, is not to discontinue the treatment with the subsidence of the symptoms, for no disease leaves behind it so many and hurtful consequences; therefore, to purify the system

and save the body of the child from mumps, dropsy, tumours, bad eyes, and many other distressing affections, it is necessary to keep up for some weeks, after the disease is cured, a mild but steady action on the body; give the child change of air, plenty of exercise, and a nutritive but light and stimulating diet.

The symptoms of measles commence with cold chills and flushes, lassitude, heaviness, pain in the head, and drowsiness, cough, hoarseness, and extreme difficulty of breathing, frequent sneezing, defluention or running at the eyes and nose, nausea, sometimes vomiting, thirst, a furred tongue, the pulse throughout is quick, and sometimes full and soft, at others hard and small, with other indications of an inflammatory nature. On the third day, small red spots make their appearance, first on the face and neck, gradually extending over the upper and lower part of the body.

On the fifth day the vivid red of the eruption changes into a brownish hue, and in two or three days more the rash entirely disappears, leaving a loose powdery discolouration on the skin, which rubs off like dandruff. At this stage of the disease, a diarrhoea frequently comes on, and being what is called "critical" should never be checked unless seriously severe. Measles sometimes assume a typhoid or malignant character, in which form the symptoms are all greatly exaggerated, and the case from the first becomes doubtful and dangerous. In this condition the eruption comes out sooner, and only in patches, and often, after showing for a few hours, suddenly recedes, presenting instead of the usual florid red, a dark purple or blackish hue, a dark brown fur forms on the gums and mouth, the breathing becomes laborious, delirium supervenes; and, if unrelieved, is followed by coma, a fetid diarrhoea takes place, and the patient sinks under the congested state of the lungs and the opposed functions of the brain. The unfavourable symptoms in measles are a high state of fever, excessive heat and dryness of the skin, hurried and short breathing, and a particularly hard pulse. The ordinary after-consequences of measles, are croup, bronchitis, mesenteric disease, abscesses behind the ear, ophthalmia, and glandular swellings in other parts of the body.

Treatment.—In the first place the patient should be kept in a cool room, the temperature of which must be regulated to suit the child's feelings of comfort, and the diet adapted to the strictest principles of abstinence. When the inflammatory symptoms are severe, bleeding in some form is often necessary, though, when adopted, it must be in the first stage of the disease; and if the lungs are the apprehended seat of the inflammation, two or more leeches, according to the age and strength of the patient, must be applied to the upper part of the chest, followed by a small blister; or the blister may be substituted for the leeches, the attendant bearing in mind that the benefit effected by the blister can always be considerably augmented by plunging the

feet into very hot water, about a couple of hours after applying the blister, and keeping them in the water for about two minutes. The first internal remedies should commence with a series of aperient powders, and a saline mixture, as prescribed in the following formularies; at the same time, as a beverage to quench the thirst, let a quantity of barley-water be made, slightly acidulated by the juice of an orange, and partially sweetened by some sugar-candy; and of which, when properly made and cold, let the patient drink as often as thirst, or the dryness of the mouth, renders necessary.

Aperient Powders.—Take of scammony and jalap, each twenty-four grains; grey powder and antimonial powder, of each eighteen grains. Mix and divide into twelve powders, if for a child between two and four years of age; into eight powders, if for a child between four and eight years; and into six powders for between eight and twelve years of age. One powder to be given, in a little jelly or sugar and water, every three or four hours, according to the severity of the symptoms.

Saline mixture.—Take of mint-water, six ounces; powdered nitre, twenty grains; antimonial wine, three drachms; spirits of nitre, two drachms; syrup of saffron, two drachms. Mix. To children under three years, give a teaspoonful every two hours; from that age to six, a dessertspoonful at the same intervals; and to children between six and twelve, a tablespoonful every three or four hours. The object of these aperient powders is to keep up a steady but gentle action on the bowels; but whenever it seems necessary to administer a stronger dose, and effect a brisk action on the digestive organs—a course particularly imperative towards the close of the disease—two of these powders given at once, according to the age, will be found to produce that effect. Thus, two of the twelve for a child under four years; and two of the eight, and two of the six, according to the age of the patient. When the difficulty of breathing becomes oppressive, as it generally does towards night, a hot bran poultice laid on the chest will be always found beneficial. The diet throughout must be light, and consist of farinaceous food, such as rice and sago puddings, with beef tea and toast; and not till convalescence sets in, should hard or animal food be given. When measles assumes the malignant form, the advice just given must be broken through; food of a nutritious and stimulating character should be at once substituted and administered in conjunction with wine, and even spirits, and the disease regarded and treated as a case of typhus. But as this form of measles is not frequent, and, if occurring, hardly likely to be treated without assistance, it is unnecessary to enter on the minutiae of its practice here. What we have prescribed in almost all cases will be found sufficient to meet every emergency without resorting to a multiplicity of agents. The great point to remember in measles is not to give up the treatment with the apparent subsidence of the disease, as the

after-consequences of measles are too often more serious and more to be dreaded than the measles themselves. To guard against this danger, and thoroughly purify the system after the subsidence of all the symptoms of the disease, a corrective course of medicine, and a regimen of exercise, should be adopted for some weeks, according to the cure of the disease.

MEASURES.—These are either of length, of surface, of solidity, or capacity. Those now in use in Great Britain are as follows:—

MEASURES OF LENGTH.

12 inches . . .	1 foot.
3 feet . . .	1 yard.
5½ yards . . .	1 rod or pole.
40 poles . . .	1 furlong.
8 furlongs . . .	1 mile.
3 miles . . .	1 league.
69½ miles . . .	1 degree.

An inch is the smallest lineal measure to which a name is given; but subdivisions are used for many purposes. Among mechanics, the inch is commonly divided into eighths, and with scientific persons, it is divided into tenths, and hundredths.

EXCEPTIONAL MEASURES OF LENGTH.

2½ inches . . .	1 nail.
4 nails . . .	1 quarter.
4 quarters . . .	1 yard.
5 quarters . . .	1 ell.

Used for measuring cloth of all kinds.

4 inches . . .	1 hand.
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Used for the height of horses.

6 feet . . .	1 fathom.
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Used in measuring depths.

792,100 inches . . .	1 link.
100 links . . .	1 chain.

Used in land measure, to facilitate the composition of the contents, 10 square chains being equal to an acre.

MEASURES OF SURFACE.

144 square inches . . .	1 square foot.
9 square feet . . .	1 square yard.
30¼ square yards . . .	1 perch or rod.
40 perches . . .	1 rood.
4 roods . . .	1 acre.
640 acres . . .	1 square mile.

MEASURES OF SOLIDITY.

1728 cubic inches . . .	1 cubic foot.
27 cubic feet . . .	1 cubic yard.

MEASURES OF CAPACITY.

4 gills . . . 1 pint . . .	34½ cubic inches.
2 pints . . . 1 quart . . .	69½ "
4 quarts . . . 1 gallon . . .	277½ "
2 gallons . . . 1 peck . . .	544½ "
4 pecks . . . 1 bushel . . .	2218½ "
4 bushels . . . 1 sack . . .	5½ cubic feet.
8 bushels . . . 1 quarter . . .	10½ "
5 quarters . . . 1 load . . .	51½ "

These measures are used for all liquids, and for all dry goods, except those which are comprised in the next division:—

2 gallons 1 peck . . .	704 cubic inches.
8 gallons 1 bushel . . .	2816 $\frac{1}{2}$ "
3 bushels 1 sack . . .	4 $\frac{1}{2}$ cubic feet.
12 sacks . 1 chaldron . . .	58 $\frac{1}{2}$ "

These last are for coal, coke, culm, lime, potatoes, fruit, and other goods commonly sold by heaped measure. The following items are also worth remembering:—About twenty-five drops of any thin liquid will fill a common-sized teaspoon. Three table-spoons will fill an ordinary-sized wineglass. Four wine glasses will fill a common-sized tumbler.—See APOTHECARIES' WEIGHT, WEIGHTS, &c.

MEAT BALLS.—Chop the meat fine as for sausages; then mix a small quantity of crumbs of bread, and a seasoning of mace, pepper, cloves, and salt, all well pounded; mix these with an egg, and make the mass into balls the size of a goose's egg. Roll them in bread crumbs and egg, and fry them; dish them up with gravy flavoured with walnut ketchup.

MEAT CAKES.—Mince cold dressed meat with a little fat bacon or ham; season it with pepper and salt; mix the whole well, and make it into small cakes three inches long and an inch and a half wide and thick; fry them a light brown, and serve with good gravy; or pour it into a mould and bake it.

MEAT, DIETETIC PROPERTIES OF.—By this is understood animal food; which, as an article of human sustenance, performs a most important part. From meat, certain juices are extracted in the process of digestion, which afford the greatest amount of nourishment to the system and nearly assimilate with the blood; and it is generally admitted that without meat, man, in England especially, would be unable to maintain his strength and vigour. Of all the meats, mutton, beef, and lamb are considered the most digestible, and pork and veal the least so. Boiled meat is more easily digested than roast, but the latter is more nutritious; baked meat is less wholesome than either. Animal food should seldom be eaten more than once a day, except it be by persons of very robust constitution, and such as have a great deal of exercise in the open air; those persons whose occupation is sedentary, should partake of it in small quantities. Meat should be eaten with vegetables and bread, as these tend to assist its digestion, and to counteract its over-stimulating properties.—See BEEF, LAMB, MUTTON, PORK, VEAL, &c.

MEAT PICKLED.—Six pounds of salt, one pound of sugar, and four ounces of saltpetre, boiled with four gallons of water, skimmed and allowed to cool, forms a very strong pickle, which will preserve any meat completely immersed in it. To effect this, which is essential, either a heavy board or a flat stone must be laid upon the meat. The same pickle may be used repeatedly, provided it be boiled up occasionally with additional salt, to restore its strength.

MEAT, PRESERVATION OF.—Directly meat comes home from the butcher's, it should be put away in the safe. In summer, it should be wiped every day, or sprinkled with pepper, to keep off the flies; and should it give tokens of being tainted, it should be brushed over with pyroligneous acid; or even if already slightly infected, the acid, or roughly pounded charcoal, if well rubbed in, will restore it. The meat should also be brought into a cool place early in the morning, for exposure to the sun renders it rapid. In frosty weather, meat is sometimes in a frozen state, and may be thawed by putting it in cold water previous to placing it before the fire. Meat becomes more tender, and consequently, more digestible, by hanging. In summer, two days is sufficient for veal and lamb; and from three to four days for beef and mutton. In cold weather, these meats may be kept for more than double the before-mentioned time, without risk of their becoming tainted.

MEAT SALTED.—In salting meat, the chief care is to rub the salt thoroughly and evenly into every part, and to fill the holes with salt where the kernels have been taken out, and where the skewers have been. In summer, the sooner that meat is salted after it is killed the better, and care must be taken to protect it from flies. In winter, it will eat shorter and more tender, if kept a few days (according to the temperature of the weather) until its fibre has become short and tender. In frosty weather take care that the meat is not frozen, and warm the salt in a frying-pan. The extremes of heat and cold are equally unfavourable to the process of salting: in the former case, the meat changes before the salt can affect it; in the latter it is so hardened and its juices so congealed, that the salt cannot penetrate it.—See BEEF SALTED.

MEDALS, TO TAKE IMPRESSIONS FROM.—Melt a little isinglass glue with brandy, and pour it thinly over the medal, so as to cover its whole surface; let it remain on for a day or two, until it is thoroughly dry and hardened, it may then be taken off, and will be found to represent a clear impression of the medal. It will also resist the effects of damp air, which occasions all other kinds of glue to soften and bend, if not prepared in this way.

MEDICINE, CAUTIONS AND DIRECTIONS RESPECTING.—In many minor complaints and trivial ailments, a person may devise his own remedies, without having recourse to medical advice; but in such cases, it is necessary that a person thus prescribing for himself, should possess some knowledge of the action of the medicine which he administers, as also of the nature of the complaint for which the medicine is taken. The following items of information will afford a general guide in these respects. *Sex*.—Medicines for females should not be so strong as those for males; therefore it is advisable to reduce the doses in the proportion of about one-eighth. *Age*.—The greatest caution should be exercised in proportioning the dose to the age of the

patient, otherwise very injurious results may arise. The following table will illustrate a pretty accurate gradation of the age and the dose:—

For an adult, suppose the dose to be 1 drachm, under

1 year	the dose will be	$\frac{1}{12}$	=	5 grains
2	"	"	=	8 "
3	"	"	=	10 "
4	"	"	=	15 "
7	"	"	=	1 scruple
14	"	"	=	$\frac{1}{2}$ drachm
20	"	"	=	2 scruples
21 to 60	"	"	=	1 drachm.

This table may be regarded as an average rule, but it is of course susceptible to exceptions. Thus, a strong child at three years of age may require, and may tolerate better a much stronger dose, than would a weaker child even one or two years older. *Time and interval*—Medicines of a purgative nature are in general best taken at bed-time, excepting those which are very active, such as castor oil, which should be taken two or three hours previously to retiring to rest, to avoid being disturbed during the night. Mild purgatives and medicines generally should be taken at intervals of every four hours, and so as not to interfere with meals; thus, eight o'clock in the morning, twelve o'clock, four o'clock, and eight o'clock in the evening, will be the most suitable division. As a general rule, medicines act more effectually when taken upon an empty stomach, and are then prevented from interfering with the process of digestion.

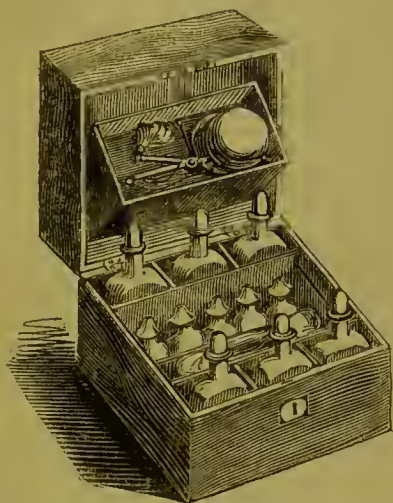
Temperament—Persons of a cold and phlegmatic, bear stimulants better than those of a sanguine temperament; therefore the latter require smaller doses. *Habit*—Purgatives, by continual use, lose a part of their action; with persons, therefore, who are accustomed to take them it is better to change the form of purgative from pill to potion, powder to draught, or aromatic to saline. Stimulants and narcotics do not act so quickly upon persons who use spirits freely, as upon those persons who live temperately. *Climate*—The action of medicine is modified by climate and seasons. In summer, certain medicines act more powerfully than in winter, and in warm climates than in colder ones, the dose should, under such circumstances, be proportionately decreased. *Idiosyncrasy*—This term means a peculiar temperament or disposition not common to people generally. For example, some persons cannot take calomel in the smallest dose without being salivated; while others, on the contrary, exhibit no symptoms of salivation, no matter how large the dose may be. With some persons, also, particular medicines produce the most extraordinary and unlooked-for results, such as convulsions, fainting, &c. In every case, where these peculiarities become manifest, the medicines should be immediately discontinued. *The most appropriate form of medicine*—Fluids act quicker than solids, and powders sooner than pills, but the latter are the best for taking at bed-time, and in all instances

where a certain rather than an immediate remedy is desired. To prevent the nauseous taste of medicines, several methods may be adopted. One way is to have the medicine in a glass as usual, and a tumbler of water by the side of it, then take the medicine and retain it in the mouth, which should be kept closed, while the medicine is being swallowed; then immediately take a draught of the water, and the nauseous taste will be entirely removed. Another efficient method for disguising the taste of medicines is, to chew a piece of orange or lemon-peel just before, and immediately after swallowing the dose. Some medicines are peculiarly nauseous, and are on that account difficult of being administered. Castor oil and cod-liver oil are of this character, both of which may be effectually disguised by being mixed with peppermint water; a strong solution of extract of liquorice covers the disagreeable taste of aloes; milk, that of cinchona bark, and cloves that of senna.

The following cautions to be observed in administering medicine, are of some importance: Follow strictly the medical directions in taking or administering medicine at the time stated. Rinse the mouth well with water after taking medicine; it not only prevents a disagreeable taste, but tends to preserve the teeth, which are liable to be injured by the action of many drugs. Always read the directions appended to medicines, so as to prevent the possibility of making a mistake. Be particularly careful when a draught and a lotion are being used by the same person, to keep the bottles distinct; and to preclude the most remote probability of a mistake, place some distinguishing mark upon one of the bottles, so that its use may become fully impressed upon the mind. In administering or taking medicine during the night, do it by the aid of a light. The neglect of these two last-named precautions has been productive of considerable loss of life. Always use a clean glass with every fresh dose; the drops of the previous draught, if suffered to mingle with the recent one, are apt to deteriorate its qualities and weaken its effects. Children have a great antipathy to medicine of every kind; when, therefore, you consider it necessary to administer a dose to them, do not suffer them to see the manipulation of it, but take them by surprise, so as to conceal your intention. When a person is undergoing a course of medicine, he should pay scrupulous attention to the orders given to him by his medical attendant, with respect to diet and regimen. It stands to reason that under the influence of medicine, the system is diverted from its ordinary course, and requires what may be termed humouring; this precaution, also, renders the struggle less obstinate, and expedites recovery.

MEDICINE CHEST.—A receptacle constructed to contain the most prominent drugs used in the practice of domestic medicine, with weights, scales, and other implements and vessels essential to their administration. Medicine chests are of the greatest convenience and importance

to families that travel much; or in cases where persons reside at a distance from a surgeon or druggist. It has frequently occurred that a serious illness has been occasioned, and life forfeited, owing to the delay which has been occasioned by the tardy arrival of the doctor, whereas a simple dose judiciously and opportunely administered, would have effectually prevented any further consequences. It is almost unnecessary to add, that the drugs should be the best that can be procured; and the chest itself should be kept in some convenient and special place, in order that it may be resorted to at a moment's notice.



An ordinary medicine chest may be fitted and furnished as follows:—Select a common deal box, made of smoothly-planed wood a quarter of an inch thick, of the following dimensions, eighteen inches long, ten inches wide, and seven inches deep: the corners of the box may be bound by two clasps of brass hoop, and the lid fastened by a hook, so as to be always available without the trouble of searching for a key. The whole length of the back is to be divided into ten divisions, to hold the bottles with liquids; this is effected by two long narrow strips of wood about half an inch deep, one resting on the bottom of the box, the other three inches above it; these are then to be subdivided into ten compartments, by two transverse slips, of the same thickness as the other. The front of the box is to be divided in the same manner, into five compartments, and the remaining space of the two sides into two each, making nine spaces in all to hold the powders. The space left in the centre will hold the few chip boxes with the pills, and the little box with scales, the glass measure, some lint, a bandage or two, and over all a folded sheet or two of wadding; a little piece of red tape, nicely tacked to the inside of the lid, and led across, as in a portmanteau, will hold tight and flat, a good piece of

adhesive plaster; and thus give, in a compact and inexpensive form, a well-stored and efficient medicine chest. Such a box can be well and neatly made for four or five shillings. It will be well, before making the box, to buy the bottles, and let the carpenter understand that they are to fit easy; and for the facility of taking in and out and give room to expose the label, the upper rail must not come higher than three inches or a little over half the bottle. The powder bottles, being much shorter than the others, will not require so high a rail.

MEDICINES.

Liquids to be contained in ten 3-ounce octagon, short-necked, green bottles:—

Spirits of sulphuric ether	1oz.
Spirits of sweet nitre	2oz.
Spirits of sal volatile	1oz.
Spirits of lavender	1oz.
Hartshorn	2oz.
Tincture of kino	1½oz.
Laudanum	1oz.
Tincture of squills	1oz.
Antimonial wine	1½oz.
Ipecacuanha wine	1½oz.
Liquor plumbi, or extract of lead	3oz.

The quantities ordered here are quite optional, less can be procured, or each bottle can have its full quantity; though as some are apt to evaporate, it would be advisable not to exceed the prescribed amounts. As stoppered bottles are apt to become fixed, and the stopper broken in the attempt to remove it, corks will be found much more convenient, and quite as safe; but the chemists' corks must not be depended on. The very best velvet corks, bought from the cork cutter, at sixpence a dozen, are to be procured; such will last without breaking for months. Powders: these are to be contained in nine 3-ounce wide-mouthed, round, white bottles; each fitted with a bung.

Prepared chalk	2oz.
Volatile salts	1oz.
Ginger powder	1oz.
Magnesia, carbonate	1oz.
Rhubarb powder	1oz.
Carbonate of soda	2oz.
Tartaric acid	1oz.
Jalap powder	½oz.
Camphor	1oz.

In chip boxes:

Blue pill	½oz.
Compound colocynth pills	24oz.
Compound rhubarb pills	24oz.
Compound assafoetida pills	12oz.
Blister plaster	½oz.

To be kept in paper:

Calomel	½oz.
Scammony	½oz.
Senna leaves	1oz.
Quassia	½oz.

In addition to these, there should be half a yard of adhesive plaster, two or three bandages of different lengths and widths, an ounce of lint, some fine wool, and one or two sheets of wadding, neatly and smoothly

folded. A small box with scales, a spatula, or short knife, and a one-drachm minimum or drop glass measure. To those who desire it, a box containing a greater number of bottles on the same scale can easily be made; but for all ordinary uses, where a chemist's shop is near to obtain any extra article prescribed, this will be found abundantly sufficient. Such a family medicine chest, bottles, drugs, corks, and everything included, except the wadding, knife, and scales, can be procured for less than a guinea. Supposing the box to cost five shillings, all else but the excepted trifles can be procured for less than fifteen shillings; thus giving a family chemistry that, with occasional replenishing, will prove a serviceable and valuable friend in need for a lifetime.

MEDICINE, DOMESTIC.—Books: *Thomson's Dictionary*, 7s.; *Tegetmeier's*, 1s. 6d.; *Andrews's Cyclopaedia*, 18s.; *Kesteven, W. B.*, 7s. 6d.; *Rapsail, F. V.*, 1s. 6d.; *Savory, J.*, 5s.; *Handbook of Domestic Medicine*, 5s.; *Graham's Modern*, 16s.; *South's Handbook*, 2s. 6d.; *Hogg's Manual*, 2s.

MEDLAR.—A small or middle-sized branching tree. The branches are woolly and covered with an ash-coloured bark, and in a wild state armed with stiff spines. The medlar is a fruit resembling the smaller apples; it has a peculiar taste and flavour, but is not fit for use until very ripe, or rather in a state of incipient decay. This ripeness is seldom or never obtained while the fruit remains upon the tree. The medlar is propagated by seeds, by layers, and by cuttings; or by grafting on seedlings of their own or any other species. If the stones are taken out of the fruit as soon as it is ripe, and immediately planted, they will come up in the course of the following spring, and make good plants in two years. The soil in which this tree thrives best is a loamy rich earth, rather moist than dry, but not on a wet bottom. When it is desired to have large fruit, all the dead and cankerous wood should be cut out, and the branches thinned. Care is requisite to train standards with tall stems. Espaliers will require a summer and winter pruning, as in the apple tree. The only mode of keeping medlars so as to prevent mould and to preserve the moisture of the fruit, is to store them in a cool place where there is constant ventilation and a supply of fresh air.

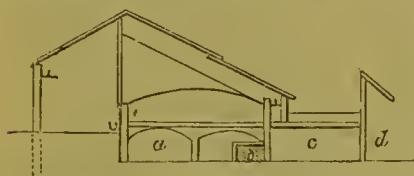
MEDLAR JELLY.—Select medlars that are quite ripe; wash them and put them into a preserving-pan with as much water as will cover them; let them simmer slowly till they become quite a pulp, then strain through a jelly-bag, and to every pint of liquor add three-quarters of a pound of loaf-sugar; boil the mixture for an hour, or until it is quite clear, and put it into preserving pots or moulds.

MEERSCHAUM PIPE.—The substance of which meerschaum pipes are made is found floating in certain parts of the sea. It is also dug from the earth in several places in Turkey. A number of pipes are made to imitate meerschaum, and as such are palmed off upon the purchaser. To detect the imposition, draw a silver coin across

the pipe; if genuine, no mark will be left; if spurious, the gypsum necessarily used will take a mark like that of pencil upon paper. The colouring of meerschaum pipes, by which their appearance is improved and their value enhanced, is best accomplished by sewing a piece of wash-leather round the bowl so as cover all but the mouth of it; by this means the oil exuded from the pipe in the progress of smoking is more surely retained, while the bowl is prevented from being scratched or suddenly cooled by being inadvertently laid on one side when it is done with. The speedy and perfect colouring also depends in a great measure upon persistent smoking and by consuming the whole of the contents of the bowl, so that the influence is spread through every part of it. Meerschaum pipes are apt to become foul from time to time, when the tubes should be cleaned by a wire with a small brush attached, and which may be purchased at any tobaccoist's shop. From continual smoking, also, the interior of the bowl is apt to become encrusted by a deposit which deteriorates the flavour of the tobacco, and prevents the pipe from being properly filled; this should be scraped out with a small knife.—See TOBACCO PIPE; TOBACCO SMOKING, &c.

MELON, CULTURE OF.—This plant can be raised either from seed or from cuttings. Old seed is preferred to new, and when it has been kept for three or four years it will be quite old enough. A bottom-heat from seventy-five to eighty degrees is essential; and when the seedlings are up and just before the second set of leaves begin to appear, the young plants may be potted into five-inch pots. Towards the end of February make the first melon bed for cucumbers, except that the mould should be more tenacious and the lights larger. One plant only should be put under each light, if the frame be of moderate size; but if two be planted, let them be fifteen inches apart lengthwise with regard to the frame. In general, melons raised from seeds should be stopped when they put off the rough leaves, and only one shoot should be allowed to run from the axils of each of the two rough leaves left on the plant. When the melon is in flower, watering overhead must be dispensed with, and gentle vapour only occasionally raised, to nourish the leaves. At this juncture every female blossom must be carefully impregnated, and as soon as the fruits are set and beginning to swell, a liberal supply of moisture and a closer atmosphere will be of the greatest service, until the fruit attains its full size, when moisture at the root and also on the leaves must be dispensed with. The impregnation of the blossoms is effected by applying the pollen of one flower to the stigma of another, and this is done by pinching off one of the male flowers, and after carefully stripping it of its corolla so as not to injure the stamen, or anther, inserting it into the female flower and leaving it there. Culture by cuttings has been recommended by some, as serving to restrict that excessive luxuriance which is frequently inimical to fertile blossoming. Under proper culture the method answers; but, on the whole, the

seedling plan is the better. It is, however, a certain mode of perpetuating choice kinds, and as such, should not be lost sight of. Healthy, free-growing, yet short-jointed shoots should be selected, and the usual bottom-heat and atmospheric temperature must be secured; in addition to this, there must be a liberal supply of atmospheric moisture, and the close treatment with shading, incidental to the growth of cuttings. When established, the plants will need no stopping, and they require a generous soil when finally planted. If a *melon-house* be employed, the form represented in the engraving should be adopted. This house is twenty-eight feet long and fifteen wide, and is heated by means of a saddle boiler, with four-inch pipes passing round the outside of the pit, which pipes are fitted with cast-iron troughs for holding water, to regulate the moisture of the atmosphere. Beneath the pit is an arched chamber, *a*,



along the front of which runs the flue, *b*, imparting a slight degree of heat to the soil above, and also serving to heat a series of arches, *c*, which run along beneath the path, and are entered from a house in front, *d*, and which are used for forcing rhubarb, &c., in the winter. The foliage of melons of whatever kind, should never be ruffled or disturbed; training and stopping, therefore, must be attended to in due time. Melons should not be encouraged to become luxuriant until a crop of fruit commences swelling; after this it is almost impossible to encourage them too much. Again, they should never be indiscriminately watered overhead, unless it be some of the ordinary green-flesh kinds, during periods of continued heat and a dry atmosphere.

MELON PICKLE.—Gather one or two well-flavoured melons within three or four days of their becoming fully ripe; first pare off the outer rind, clear them from the seeds, and cut the fruit into slices of about half an inch thick; lay them in good vinegar, and let them remain in it for ten days; then cover them with cold fresh vinegar, and simmer them very gently until they are tender. Lift them on to a sieve reversed, to drain, and when they are quite cold insert a couple of cloves into each slice; lay them into a jar, and cover them well with cold syrup, let it drain from them a little; then put them into jars in which they are to be stored, and cover them again thoroughly with good vinegar which has been boiled for an instant and left to become quite cold before it is added to them. This pickle is intended to be served with roast meats, particularly mutton, venison, and hare, instead of currant jelly; it is also very good with stewed meats.

MELON PRESERVE.—When the melon is nearly ripe, pare it thinly and cut it into pieces resembling ginger; cover it with salt water, changing it every day for three days; then put it in clear spring water, changing it twice a day for three days. Make a thin syrup, and boil it with the melon once every day for three times. Next make a thick syrup, adding the peel of one or more lemons, according to the quantity of melon; then add some of the finest white ginger, with the outside pared off, so as to impregnate the syrup strongly with the ginger. Boil this, and when cold put to the melon. Finally, tie the preserve down in pots.

MELTED BUTTER.—Although this is a culinary preparation which is frequently required, and extremely simple to compound, yet it is rarely sent to table as it should be. It is either too thick or too thin, and not unfrequently filled with lumps of flour, or oiled. All this is the result of carelessness and inattention. The excellence of melted butter greatly depends upon the pains taken to blend it with the flour before it is put over the fire, the best plan of doing which is to rub them together with a knife upon a wooden trencher. When well mixed, add two tablespoonfuls of hot water, or the same quantity of milk; put it into a small pipkin, shaking it in a uniform direction until it boils, and not leaving it for an instant; it must boil for a minute to take off the rawness, and if made of fresh butter, a little salt should be added. It should be borne in mind that if the mixture is set on the hot coals, or over the fire, it will be oily; if the butter and flour be not well mixed, it will be lumpy; and if too much water be employed it will be poor and thin. *The recipes for making the various kinds of melted butter are as follows:*

—*Rich melted butter.*—Mix to a very smooth batter a dessert-spoonful of flour, half a salt-spoonful of salt, and half a pint of cold water; put these into a very clean saucepan, with from four to six ounces of well-flavoured butter, cut into slices, shake the sauce well round, almost without cessation, until the ingredients are perfectly blebbed and the mixture is on the point of boiling; let it simmer for two or three minutes, and it will then be ready for use. *Ordinary melted butter.*—Put two large teaspoonfuls of flour with a little salt into a basin, mix with them very gradually and smoothly half a pint of cold water; put these into a small clean saucepan, and stir them constantly over a clear fire until they have boiled for two or three minutes; then add three ounces of butter cut small; keep the sauce continually stirred until the butter is entirely dissolved; give the whole a minute's boil, and serve it quickly.

White melted butter.—Thicken half a pint of new milk with two teaspoonfuls of flour, and stir into it by degrees after it has boiled, two ounces of fresh butter cut small; stir the sauce continually until this is entirely dissolved; then serve. *Brown melted butter.*—Put three ounces of fresh butter into a frying-pau, and toss it round over the fire until it becomes brown; then dredge some flour over it, which has been previously browned by placing it either in the oven or

before the fire; stir the mixture round with a spoon until it boils. *Melted butter without flour.*—Put three tablespoonfuls of water into a small saucepan, and when it boils, add four ounces of fresh butter; as soon as this is quite dissolved, take the saucepan from the fire, and shake it round until the sauce becomes thick and smooth. It must not be allowed to boil after the butter is added. *French melted butter.*—Pour half a pint of good, but not very thick boiling melted butter to the well-beaten yolks of two or three fresh eggs, and stir them briskly as it is added; put the sauce again into the saucepan, and shake it high over the fire for an instant, but do not allow it to boil, or it will curdle. Add a little lemon-juice or vinegar, and serve it immediately. The melted butter which is not used need not be thrown away or wasted; it will answer the purpose excellently for mashed potatoes on the following day. On the other hand, the quantity made should not be insufficient for the number of persons who are to partake of it; so that, in order to prevent a scarcity or excess, the extent of the party should be taken into consideration, and the butter made in corresponding quantity.

MEMORY.—The exercise of memory is an art within the compass of any person possessed of ordinary ability and intelligence. Forgetfulness is, in the majority of instances, another word for indifference, since it is notorious that persons nearly always contrive to remember matters, however indefinite or remote, where self-interest is concerned. This view of the case is taken by the world generally; so that to tell a person that you have forgotten a certain thing in which that person was chiefly interested, is tantamount to confessing that you did not feel inclined to take the trouble which would be entailed. When we consider how much of our happiness and comfort in the world depends upon mutual assistance, and that many of these performances are the result of previous promises, it becomes essential to both ourselves and others that our word may be relied on. In business transactions, the exercise of memory is of the utmost importance; so much so, that when this faculty is defective, the unhappy possessor is simply regarded as incompetent, and totally unfit for the post he occupies. To escape the disgrace and humiliation which are thus entailed, it behoves every person, whose memory is what is usually termed constitutionally defective, to make the most strenuous exertions, and devise the very best means in his power to supply a remedy. One of the best means to ensure things being performed, is for a person to keep a record of coming events in which he is concerned, and a systematically arranged list of engagements and promises, and every other obligation, social or commercial, to which he stands pledged. For this purpose, diaries are published, in which a person should enter every engagement directly it is made, under its appropriate date; the possessor of the diary should then by habit bring himself to consult this diary every day at an

early hour, so that he may commit to memory, or copy into a pocket memorandum-book the various appointments set down for that particular day. The same rule applies to promises which have no definite date of performance, but are left to opportunity and other contingencies—a memorandum should be immediately made of these; and from time to time they should be read over and acted upon, and never lost sight of until they are fairly out of hand. A very good method of reminding one's self of some particular thing one has to do, is to alter the position or form of some familiar object that is constantly meeting the eye, or coming in contact with the touch. Thus, turning a ring round, so that the part which is usually outwards, is reversed; or tying a knot in the neckerchief; or placing a pin in the cuff of the coat; with numerous other simple contrivances, all serve to act as reminders of some special circumstance with which these contrivances have become associated in the mind. Another plan is, when a name or number is heard for the first time, to connect it with some other words or phrase which have a somewhat similar sound but a different meaning. Thus when you are told that a person's name is Graham, you have only to think of the colour *grey*, and the meat *ham*, and when at some future date you endeavour to recall the name to mind, the combination thus suggested will recur to the memory, and the name will be arrived at. Or when you are told that the number of a certain residence is five, you have only to connect that number with the fingers on the hand, and it will recall the memory to the number required. It will be found that there is scarcely a name of a person or thing, or any number, but is capable of being associated with some other representative idea.

MENDING, CLOTHES, &c.—A considerable saving in the expenditure of income, is effected by the timely repair of articles of wearing apparel and domestic use. In large families this is especially the case, the clothes of children standing in need of constant repairs. Next to strength, the great object in mending is, that the repair should be hidden as much as possible. For this purpose, it would be as well, when purchasing the materials for new clothes, to buy a certain quantity over and above, to be kept as a sort of reserve store, and to be used as occasion requires. A bag or box should also be kept expressly for remnants of every kind to be placed in—cloth, silk, cotton, &c., so that when repairs are needed, the manipulator is never at a loss for the necessary materials. A thorough mending at once is better than a temporary patch, followed by successive attempts of a similar kind; the former method will be found more economical, and a considerable saving of time, as well as being far neater. In cases where a fracture or rent is caused in good clothes, and in a conspicuous place, it is better to leave it to a professed mender of clothes, as in many cases they are able to remedy the defect without leaving any trace of the damage that has been done.

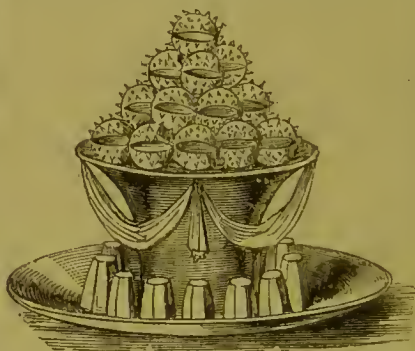
MENSURATION.—An application of arithmetic to dimensions and bulk. Every superficies is the multiple of its length by its breadth, in equal denominations. To reduce the product of inches into feet, divide by 144, the inches in a square foot; or if in feet, by 9, for square yards; or if in yards, by 4840, for acres. Every solid has three dimensions, length, breadth, and depth; and the multiple of these together is the cubic inches, feet, or yards, in whichever the dimensions are taken. Bring inches into feet by dividing by 1728, the cubic inches in a cubic foot; or, feet into yards, by dividing by 27, the cubic feet in a cubic yard. When lengths or breadths are irregular, several should be taken, added together, and divided for a mean by the number; or, a figure may be reduced to two or more regular figures, and the dimensions of each added for the whole. Very irregular figures are measured by immersing them in water in any regular vessel, and then determining the measure of the water which they displace.

MENTAL EXERCISE.—The mind, like the body, requires a certain amount of exercise to maintain it in a healthy condition; and like the body, it is also susceptible to fatigue, and liable to injury from over-exertion. It will thus be obvious that a certain portion of each day should be set apart for mental culture; while, on the other hand, the exercise of the mental faculties should not be carried beyond a certain limit when once symptoms of fatigue have unmistakably shown themselves. The best period for mental exercise, both as regards the powers of the mind itself, and the general health, is early in the morning; but at such times the student should not set out upon his task without taking some refreshment, which may be as light and as little stimulating as possible. It is always injudicious to enter upon mental labour immediately after a full meal; under such circumstances the work performed requires double the usual amount of labour, with only one half the effect. As a general rule, a code of laws, similar to those which regulate the exercise of the body, apply to the exercise of the mind; it is rarely, therefore, that a person can make a mistake, especially if he keeps before his eyes the leading principles of moderation and regularity.

MERCURY.—The mercurial preparations or salts, used as medicaments, are divided into the *OXIDES*—of which there are two kinds, the *protoxide* and the *peroxide*—the *NITRATES*, the *SULPHURETS*, and the *CHLORIDES*; one or two other compounds are occasionally employed, but the above are the chief divisions. Of these, the *protoxides* are the most simple, safe, and manageable; and the *chlorides* the most potent and powerful. Among the first, or *protoxides*, are included such preparations as the two grey powders, that of mercury and chalk, and mercury and magnesia; blue pill, mercurial ointment, and mercurial plaster. Among the *chlorides* are the well-known preparations of calomel, and corrosive sublimate.


The effect of mercurial compounds on the system is, first, by entering the circulation to excite the whole capillary arrangement of the body, and thereby increase all the secretions and excretions, through its direct stimulating action; yet by the manner in which the mercury is employed, the dose in which it is given, and the affected organ for which it is used, mercury, though a general stimulant to the system, may be made to act as a cathartic, a diaphoretic, expectorant, sialagogue, and emetic; as an erbrane, to produce sneezing, or any other specific action desired. From this variety of operations, mercury has been employed in almost all the diseases of the body, and has been found especially serviceable in all febrile affections, spasms, glandular obstructions, cutaneous diseases, and inflammatory affections of the lining membranes.—See **BLUE PILL**, **GREY POWDER**, &c.

MERINGUES.—A species of confection which forms a part of a better class of repast, and which is made as follows:—Whisk to the firmest possible froth the whites of six new-laid eggs, taking every precaution to prevent the smallest particle of yolk from falling in amongst them. Lay some squares or long strips of writing-paper closely upon a board, or upon very clean trenchers. When all is ready, mix with the eggs three-quarters of a pound of the finest sugar, well dried and sifted; stir them together for half a minute, then with a tablespoon lay the mixture quickly on the



papers in the form of a half-egg: sift sugar over them without delay, blow off all that does not adhere, and set the meringues in a gentle oven. The process must be expeditious, or the sugar melting will cause the cakes to spread, instead of retaining the shape of the spoon as they ought. When they are coloured to a light brown, and are firm to the touch, draw them out, turn the papers gently over, separating the meringues from them, and with a teaspoon scoop out sufficient of the insides to form a space for some whipped cream or preserves, and put them again into the oven upon clean sheets of paper, with the moist sides uppermost, to dry; when they are crisp enough they are done; let them become cold, fill and join them together with a little white of egg, so

as to give them the appearance shown in the engraving. Spikes of almonds can be stuck over them as there represented.

 Eggs, 6 whites; sugar, $\frac{1}{2}$ lb.; almonds, sufficient.

MERINO.—A fabric manufactured of wool, and the best qualities of which are imported from France. To judge of the quality of merino, it should be understood that the fineness of the cloth depends upon the number of threads which are discoverable in any given section. Manufacturers and buyers are provided with magnifying glasses, by which they are enabled to count the threads more readily. Upon a somewhat similar plan, a square may be cut in a piece of paper, and when several samples of merino are laid before the intending purchaser, the threads may be counted by the naked eye; and that sample in which the largest number of threads are discovered, will be the finest. Merino is one of the most durable and serviceable articles of wearing apparel that is manufactured, and the finer the texture is, the longer will it wear.

MERINO, TO CLEAN.—Grate two or three large potatoes; add to them a pint of cold water; let them stand for a short time, and pour off the liquid clear, when it will be fit for use. Lay the merino on a flat surface, and apply the liquid with a clean sponge, till the dirt is completely extracted; dip each piece in a pailful of clean water, and hang it up to dry without wringing. Iron, whilst damp, on the wrong side. It will then appear almost equal to new.

MESMERISM.—A physiological phase, in which sleep is supposed to be produced by the influence of certain definite operations. This influence is said to be regulated by the sympathy existing between the operator and his subject, and by the organisation and temperament of the person operated upon. Some persons are easily sent into a deep sleep, while others require much patient manipulation before they can be induced to close their eyes. The science has many disciples, and many antagonists; but it is always possible to set doubt at rest by making experiments upon persons, much after the manner of the professors, the mode consisting principally in passing the hand before the eyes with a persistent and regular action.

METALS, CARE OF.—Tin-plate vessels should be carefully dried after washing, or they will soon rust in holes. Iron coal-scoops are liable to rust from the damp of coals, if left in them. If cold water be thrown on a cast iron grate when hot, it will crack. Cast iron articles are brittle, and cannot be repaired. Ornamental furniture, inlaid with brass or buhl, should not be placed very near the fire, as the metal when it becomes warm expands, and being then too large for the space in which it is laid, starts from the wood. Articles made of German silver, if left in vinegar, or any acid mixture, will soon become coated with verdigris. Salt should never be left in silver cellars, or the metal will be much injured.

METALS, TO REMOVE STAINS FROM.—When metals become rusty, or are covered with verdigris, they should be rubbed with sand or emery; but if the substance is deeply affected, it will require filing. The polish may be afterwards restored by applying a very fine powder of emery, moistened with oil, and cleaned off with a leather covered with whiting. Silver, gold, or tin, which is stained by any sulphureous emanation, should first be washed with water slightly acidulated with vinegar, and then rubbed with whiting.—See **PLATE-POWDER.**

MEZEREON.—A hardy shrub, native of England, growing to the height of five or six feet, and having a smooth exterior bark of a grey colour. The root of this plant is employed in the form of an infusion to



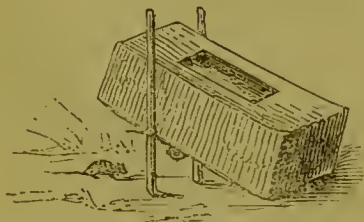
correct impurities of the blood, and is thus taken by itself, or as an auxiliary to sarsaparilla. The bark and berries, formed into ointments and infusions, are frequently used as external applications to obstinate ulcers and long standing sores.

MIASMA.—See **AGUE.**

MICE.—The ravages committed by these little animals are frequently serious, and the cause of much annoyance. When numerous, they are a greater nuisance than rats, as they make inroads into cupboards, and render the food which they do not eat unfit for use, by the dirt which they leave upon it. Traps of various kinds have been devised for catching mice; one of the most ingenious is a jar half filled with water, on which is strained a piece of parchment; towards the middle of the parchment it is cut through in different directions, and a piece of cheese is so placed, that when the mouse nibbles it, the parchment gives way, and causes the animal to fall into the water, in which he quickly dies, or may be easily captured. A variety of traps are also sold, each with some peculiar device; but the little creatures are so cunning, that in the course of time they frequently learn the art

of securing the bait without forfeiting their liberty. Although there is a great difficulty in keeping away mice, it is always possible to prevent their touching the food: thus, bread, butter, cheese, &c., may be kept in appropriate pans which defy their entrance. This precaution will also tend to drive them away finally; for when, after repeated attempts, they discover that there is nothing to be obtained, they will, as a matter of course, transfer their attention to some more promising locality. Mice may also be destroyed by means of poisons and pastes; the following is found to be effective: Melt a pound of lard with a very gentle heat in a bottle or glass flask plunged into warm water, then add half an ounce of phosphorus, and a pint of proof spirit; cork the bottle securely, and, as it cools, shake it frequently, so as to mix the phosphorus uniformly; when cold, pour off the spirit (which may be preserved for subsequent use), and thicken the mixture with flour. Small portions of this mixture may be placed near the mice holes, and, being luminous in the dark, are readily seen, greedily eaten, and prove certainly fatal. The objection to this latter mode of destruction is that it may prove destructive to human life, either by becoming accidentally mixed up with food, or by being found by children.

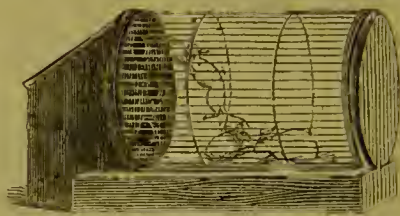
Field and garden mice commit serious depredations by turning up seed, destroying young trees, and barking various shrubs and plants. If a little garlic is planted with any roots or seeds, it will prevent mice from eating them. Peas and beans are peculiarly liable to the ravages of mice, a successful mode of counteracting which, is to cover the surface of the soil over the rows to the depth of an inch, and the width of six inches, with finely sifted coal ashes. The mice will not scratch through this covering, and it has the additional advantage, by its black colour absorbing the solar heat, of promoting the early vegetation of the crop. A simple and effective trap may be made, as seen in the engraving; it con-



sists of a common brick with two pieces of wood inserted into the ground; a bit of sewing-thread is tied to each stick, and a loop is formed in the thread in the centre, into which a bean is put. To form this loop, it is only necessary to take the two ends of the string and cross them, in the same manner as when tying a common knot; then draw the ends, and the loop so formed will become smaller; insert the bean, and draw the thread tight, until it slightly penetrates the bean. Poise the bean half-way between

the two sticks, and let the brick rest upon the string, which should be tied tightly. When the mouse nibbles at the bean, it will gnaw the thread, the brick will fall, and the mouse will be killed.

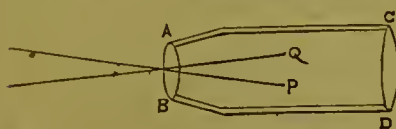
MICE, WHITE.—These little animals are kept as pets. They may be purchased for a moderate sum at any bird-shop; and they require but little attention. Born and bred in confinement, they are so gentle and familiar that even when suffered to run loose about a room they will not attempt to escape. The principal food for white mice is bread and milk, oatmeal, grits, and any other common food, except cheese or meat, which are objectionable. There are several sorts of cages for keeping mice. The most common is similar to that for the squirrel on a small scale, its size depending on the



number of inmates it is to contain. Some are furnished with a wire wheel, by which the little animals amuse themselves for several minutes at a time in the course of the day. Other cages are fitted up like houses, with separate rooms and staircases, which the mice are obliged to ascend in order to obtain their food, which is usually placed in the highest story. Particular care should be taken to keep the cage always thoroughly clean, for which purpose it should be attended to every morning; the bed, also, should be frequently changed, except after littering, when the sleeping box must not be opened at all for three or four days. The female mouse generally produces six or eight broods in the course of the year, consisting on each occasion of from three to eight young ones. The male will sometimes devour the young; and when once he has done this, it will be advisable to place him in a separate cage on future occasions until the young are about a fortnight old, when they are able to shift for themselves. When the female has a litter of young ones, and, indeed, at all times, care should be taken to keep the cage in a warm, dry situation, and out of reach of cats.

MICROSCOPE.—An instrument constructed for magnifying minute objects, and one which is capable of affording never-ending instruction and entertainment. The *solar microscope* is constructed in the following manner:—In the inside of a tube is placed a convex lens A R, and at a distance a little greater than its focal length, but less than double of it, is fixed some transparent coloured object Q R, at the focus conjugate to the place of the object. A broad lens, C D, is placed before the object to collect the

solar rays, for the purpose of illuminating it more strongly, and, consequently, making the image more distinct and vivid. A very convenient extemporaneous microscope may be made by pricking a fine hole in a card, or



piece of stiff paper. The narrow pencil of rays is manageable by the front of the eye, and objects may be distinctly seen at half an inch, consequently with linear increase of sixteen, and superficies of two hundred and fifty-six. At three or four inches, such a hole will supply the place of spectacles.

MIGNONETTE.—A hardy annual, native of Africa, and universally esteemed as an unpretending and sweet-smelling flower. The ordinary culture is to sow the seed in the open ground from the end of April to the beginning of July. If allowed to seed, and the soil suits it, mignonette will continue to propagate itself. If not allowed to ripen its seed, the same plants will bloom for two or more seasons. Mignonette being so much in demand as a chamber flower, it is of importance to have a succession of



plants in all seasons. For this purpose, to obtain a winter supply of fresh, strong plants, the seed should be sown in the open ground at the end of July; by the middle of September, the plants from this sowing will be strong enough to be removed into pots. For a week after this removal they must be shaded, after which they may be freely exposed to the sun and air, care being taken to protect them by frames from damage by heavy rains, and from injury by early frosts, until the beginning of November, at which time many of them will show

their flowers; and they should then be removed to a greenhouse or conservatory, or to a warm window in a dwelling-house, where they will branch out and continue to blow until the end of spring. The crop for March, April, and May should be sown in small pots not later than the 25th of August; the plants from this sowing will not suffer from exposure to rain whilst they are growing; they must, however, be protected from early frosts; like the winter crop, they are to be thinned in November, leaving not more than eight or ten plants in each pot; and at the same time, the pots being sunk about three or four inches in some old tan or coal-ashes, should be covered with a frame, which it is best to place fronting the west; for in this situation the lights may be left open in the evening to catch the sun. The third, or spring crop, should be sown in pots not later than the 25th of February; these must be placed in a frame on a gentle heat, and as the heat declines, the pot must be let down gently three or four inches into the dung-bed, which will keep the roots moist, and prevent their leaves turning brown from the heat of the sun in April and May. The plants thus obtained will be in perfection by the end of May, and be ready to succeed those raised by the autumnal sowing. An early and abundant blow of mignonette may also be obtained by using a common box, placed on the window-sill, in a warm situation, exposed to the sun. In early spring this box should have a glass frame fitted as a covering, to be removed in summer, and which can be obtained at a very moderate expense. About the middle or the end of February fill this box with fresh light mould, to which add a little sand, and a sprinkling of lime or pounded chalk, or whiting. Then sow the seed rather thickly, and cover it over with a portion of the finely pulverized mould. The box should be kept inside the window until the plants appear, and then be put outside in March, taking care to cover it up in severe weather, and on frosty nights. As the plants advance, they are to be thinned out, air admitted in the sunny part of the day, and a sufficient supply of water given, so as to keep the mould moist. The glass frame may be removed in April or May, at the end of which latter month the plants will begin to flower; and if properly tended and watered, the bloom will continue till November. Mignonette requires the sun and air in order to produce its full and perfect odour; and, on this account, even the pots of this plant should be generally exposed to the open air. For the *tree mignonette*, sow the seeds at the end of April, and in order to ensure the tree lasting in good health for several years, lay a good foundation, to begin with. Employ a good rich compost of mellow loam, and one-third very rotten cow-droppings, with a little sand; and, to keep this from getting too close, add a handful of dry lime mortar to each pot of six-inch diameter, and so in proportion for larger or smaller pots; the mortar to be in lumps of the size of peas. Take as many three-inch pots as there are plants to fill

them; drain them with pieces of mortar, and over that put a little of the roughest of the compost; fill up the pot nearly level with the top, and place three seeds in the very middle of each pot, and nine or ten seeds all over the surface; cover them slightly with earth, and press them down tight. Water them, and put them up in the window of the greenhouse; and if the seeds are good, the plants will begin to show in less than ten days; give them abundance of air, and no forcing. When the day is at all fine, put them outside the window from ten in the morning till three in the afternoon. Water them gently in the morning when they are placed outside, as they will have time to drain and dry before they are taken in for the night. If the three seeds in the centre come up, the weakest of the three must be pulled out as soon as it can be got hold of; the rest must be thinned one half. The reason for sowing so many seeds in one pot, and for thus thinning them out afterwards, is to make sure of one good plant; if the middle one turns out to be so, that must be selected, but if not, the strongest and most promising must be chosen from the rest. When the plant which is to form the future tree is fixed upon, place a neat little stick down by the side of it, a foot long, and pushed down to the bottom of the pot. When the plant is two inches in height, tie it loosely to this stick with a piece of worsted. Continue tying it regularly as it grows, and when it reaches the top of the stick give it a longer one. Sometimes the tree is suffered to grow to the height of three or four feet or more. When they have attained the height desired, the shoots must be suffered to extend themselves from the top, but must be occasionally stopped at the ends to force them to form a bushy head, which, by the autumn, will be eight or nine inches in diameter, and covered with bloom. Whilst the plants are attaining their proper size, they should be shifted progressively into larger pots, and may be alternately left in those of six inches diameter at the top.

MILDEW.—A species of fungus which covers the surface of objects it attaches itself to with a whitish coating, thereby causing much injury, and, if not opportunely checked, ultimate destruction. *Mildew in agriculture* is often attended with the most serious consequences. In cultivated crops, it is said to be prevented by manuring with soot. Thinning and ventilation are also safe practical methods. Another prevention against mildew for plants is to syringe them occasionally with a decoction of elder leaves, which will prevent the fungus growing on them. *To take mildew out of linen, &c.*, mix soft soap with starch powdered, half as much salt, and the juice of a lemon; lay it on both sides of the part with a painter's brush. Let it lie on the grass day and night till the stain is removed. *Mildew infesting walls, closets, &c.*, may be easily prevented and remedied by general cleanliness, together with periodical painting and white-washing.

MILK.—A substance consisting of three materials, which can be separated by artificial means, so as to form butter, buttermilk, and whey. When taken from the cow, milk should be removed to the dairy or milk-house, and after being sieved, placed in shallow pans, to throw up the cream. Of the milk drawn from any cow at one time, that part which comes off at the first is always thinner, and of a much worse quality for making butter than that afterwards obtained; and this richness continues to increase progressively to the very last drop that can be obtained from the udder. If milk be put into a dish, and allowed to stand till it throws up cream, the portion of cream rising first to the surface is richer in quality, and greater in quantity, than that which rises in a second equal space of time; and the cream which rises in the second interval of time is greater in quantity and richer in quality than that which rises in a third equal space of time; that of the third exceeds the fourth, and so on with the rest. Thick milk always throws up a much smaller proportion of the cream which it actually contains than milk that is thinner; but the cream is of a richer quality; and if water be added to the thick milk, it will afford a considerably greater quantity of cream, and consequently more butter than it would have done if allowed to remain pure: but its quality is at the same time greatly deteriorated. Milk which is put into a bucket or other proper vessel, and carried in it for a considerable distance so as to be much agitated, and in part cooled, before it be put into the milk pans to settle for cream, never throws up so much or so rich a cream as if the same milk had been put into the milk pans without agitation directly after it was milked. The quality of milk is affected by the variations of seasons and temperature. The formation of cream is facilitated by a rise of temperature, and retarded by a fall. In wet and cold weather the milk is less rich, than when the weather is dry and warm. The milk in spring is generally considered the best for calves; in summer for cheese, and in autumn for butter. The economy of milk is regulated by some important practical rules. Cows should be milked as near the dairy as possible, in order to prevent the necessity of carrying and cooling the milk before it is put into the creaming dishes. Every cow's milk should be kept separate till the peculiar properties of each are so well known as to admit of their being classed, when those most nearly allied may be mixed together. When it is intended to make butter of a very fine quality, reject entirely the milk of all those cows which yields cream of a bad quality, and also keep the milk that is first drawn from the cow at each milking entirely separate from that which is last obtained, as the quality of the butter must otherwise be greatly debased, without materially augmenting its quantity. For the same purpose, take only the cream that is separated from the first drawn milk. Cows less frequently milked than others give richer milk. The morning's milk is richer than


the evening's. The last drawn milk of each milking is at all times and seasons richer than the first drawn, which is the poorest.

MILK BAKED.—Mix new milk with buttermilk, in the proportion of a pint of the former to a wineglassful of the latter. Let it stand in a covered jar before the fire all night; in the morning it will be as thick as clotted cream. Pour from one jar to another, till it is again of the consistency of new milk; put it into a stone hottle, tightly corked; add a few lumps of loaf sugar, let it stand again before the fire for five or six hours, it will then be ready to drink. Care must be taken on opening the bottle, as the milk sometimes effervesces. Besides forming a very wholesome and strengthening drink, it is a most delicious and refreshing beverage in summer.

MILK BISCUITS.—Take a quarter of a pound of butter, a quart of milk, a gill of yeast, as much flour as will form the dough, and a little salt. Stir the flour into the milk so as to form a very thick batter, and add the yeast. This should be done in the evening; on the following morning cut up the butter, and set it near the fire where it will dissolve, without becoming hot; pour the melted butter into the sponge, and then stir in enough flour to form a dough, knead it well, and set it by to use. As soon as it is perfectly light, butter the tins, mould the dough into small cakes, and let them rise. When they are light, bake them in a very quick oven, take them out, wash the tops over with water, and serve them hot.

MILK, DIETETIC PROPERTIES OF.—As a food, milk is esteemed very wholesome and nourishing, as well for adults as for children. In some cases, however, it disagrees with persons taking it, being difficult of digestion, and causing flatulence and acidity; this latter effect may be remedied by mixing half an ounce of lime water to each pint of milk. Milk, when it agrees with a person, is useful in scrofulous affections, and where debility and want of tone exist, in the early stages of consumption, in cases of enlarged glands, diseases of the joints, and continued rheumatism. A milk diet is extensively employed for invalids, and consists of milk mixed with bread, rice, sago, oatmeal, and other farinaceous substances; and forms in every case a very nutritive and readily assimilated aliment.

MILK LEMONADE.—Dissolve six ounces of loaf sugar in a pint of boiling water, and mix with them a quarter of a pint of lemon-juice, and a gill of sherry; then add three-quarters of a pint of cold milk; stir the whole well together, and pass it through a jelly-bag till clear.

 Sugar, 6ozs.; water (boiling), 1 pint; lemon-juice, $\frac{1}{2}$ pint; sherry, 1 gill; milk, $\frac{3}{4}$ pint.

MILK OF ROSES.—A favourite cosmetic prepared as follows: Dissolve over a slow fire in a glazed pan, half an ounce of spermaceti, half an ounce of virgin wax, and half an ounce of white soap cut into shreds. Pound in a mortar half a pound of sweet almonds, and an ounce of bitter

almonds, previously blanched; set three-fourths of the almonds on one side, and pour upon the remainder in the mortar the contents of the pan, pounding briskly, and incorporating thoroughly, and adding, by degrees, the almonds which have been taken out, until a fine paste is produced from the whole; mix in a large hottle, a quart of water, a pint of rose water, and half a pint of spirits of wine, in which about ten drops of attar of roses have been dissolved. Pour three-fourths of this mixture, by degrees, upon the mass in the mortar, and work it up thoroughly; then strain the milk through a cloth. With the remaining fourth of the mixture, work up in the mortar the pulp which remains in the cloth, strain it, and add to the milk first expressed. Before the milk is bottled, it should be strained through a fine sieve. A more simple mode of preparing this cosmetic is to mix twenty drops of the oil of tartar with an ounce of olive oil, and an ounce of almond oil, and having poured it off carefully, add it to a quart of rose water, and an ounce of spirit of wine, in which four drops of attar of roses have been mixed.

MILK PORRIDGE.—Stir four table-spoonfuls of oatmeal, smoothly, into a quart of milk, then stir it quickly into a quart of boiling water, and boil it for a few minutes till it thickens; sweeten with sugar.

MILK, PRESERVATION OF.—Milk is of a very delicate nature, and has a tendency to become sour in a comparatively short space of time. In warm weather, milk will turn in a few hours, but in the winter it will remain good for two or three days; very intense cold, however, will sometimes decompose it; so that it should be carefully kept from the action of frost; during the hottest weather, milk may be kept sweet for several days by boiling it night and morning, if a little carbonate of soda previously dissolved in water be put into it; for this purpose, an ounce of carbonate of soda should be dissolved in half a pint of water, and a tablespoonful of this mixture be added to a quart of milk. Above all, the jugs, pans, and other vessels, in which milk is placed should be kept scrupulously clean and dry, and scalded from time to time, so as to prevent the new milk being vitiated by the refuse of the previous portion. *To preserve milk for long voyages,* the following mode should be adopted. Provide bottles, which must be perfectly clean, sweet, and dry; draw the milk from the cow into the bottles, and as they are filled, immediately cork them up securely, and fasten the corks with twine or with wire. Then spread a little straw at the bottom of a boiler, and place two bottles in it with straw between them, until the boiler contains a sufficient number. Fill it up with cold water, heat the water, and as soon as it begins to boil, draw the fire; and let the whole gradually cool. When quite cold, take out the bottles and pack them in sawdust in hampers, and stow them in the coolest part of the house. Milk preserved in this manner will remain

in the bottles perfectly sweet for eighteen months.

MILK PUNCH.—Take a quart of lemon-juice, four quarts of rum, four quarts of water, two quarts of milk, and three pounds of loaf sugar. Mix the lemon-juice, rum, and water together, and dissolve the sugar in them; after which pour in the milk boiling hot, and put in the peel of four lemons. Strain it through a bag, and bottle it for use. It may be drunk immediately, or kept, as desired.

LEMON-JUICE, 1 quart; lemon rinds, 4; rum, 4 quarts; water, 4 quarts; milk, 2 quarts; sugar, 3lbs.

MILK RESTORATIVE.—Boil a quarter of an ounce of isinglass in a pint of new milk till it is reduced to half, sweeten to taste, and drink either warm or cold.

MILK SOUP.—Take two quarts of new milk, with two sticks of cinnamon, a couple of bay leaves, a very little salt, and a small quantity of sugar; blanch half a pound of sweet almonds while the milk is heating, beat them into a paste in a mortar, and mix them by degrees with some milk, set them by the fire, and add a little grated lemon-peel and a small quantity of lemon-juice. Strain it through a coarse sieve, and mix it with the milk that is heating, let the whole boil up; cut some slices of French roll, and dry them before the fire, soak them a little in the milk, lay them in the bottom of the tureen, pour in the soup, and serve.

MILK SUET.—Cut an ounce of mutton or veal suet into shreds, and warm it slowly over the fire in a pint of milk, adding a little grated lemon-peel, and cinnamon and loaf sugar to taste.

MILK TESTER.—Milk is adulterated to a great extent, sometimes with water only, and at others with ingredients more or less hurtful. The smell and colour are ordinary signs by which the quality of milk may be judged. When the blue tint is evident,

the milk is not unctuous; and when too clear, the presence of water may be suspected. If the substance of milk be good, a drop placed upon the nail of the finger will remain attached to it with a pearly appearance; if, on the contrary, it be poor, it will run off like water. The most reliable guide of any, however, is the milk tester, as seen in the engraving. In using this instrument, place it in water, and drop on the rings with which it is furnished until it floats at the line of the W (water), then place it in the milk which is to be tested, and its quality will be at once shewn. For instance, should the instrument float at 3, the mixture would be composed of three parts milk and one part water; at 2, half-and-half; at 1, one part milk, and three



parts water.

at any part between the divisions, it must be calculated accordingly; for instance, should it float between the M and the 3, the milk would be three and a half to a half water; between the 3 and 2, two and a half milk to one and a half water, and so on.

MILK THICKENED.—Mix a pint of milk with a pint of water, and boil them with a tablespoonful of flour. Dissolve the flour first in half a teacupful of water; strain it gradually, and boil the whole for twenty minutes. This mixture, if properly made, forms a delicate and nutritious food for infants six months old and upwards.

MILK VINEGAR.—To a quart of milk add six tablespoonfuls of brandy; put this mixture into a bottle, which must be closely stopped and placed in a warm situation, giving air from time to time to assist the fermentation; at the end of a month this will have become good vinegar. It is then to be strained, and kept in a bottle, closely corked, for use.

MILKING.—This process should be performed upon the same principles which instinct has implanted in the calf, and the young of other milk-giving animals. First take hold of the teat by the hand, so as to simply encircle it, then lift the hand up in order to press the body of the udder upwards, by which the milk escapes into the teat; or if the teat be full, as is generally the case when long intervals elapse between milking times, grasp the teat close to its origin with the thumb and forefinger, to prevent the milk which is in the teat escaping upwards; then cause the rest of the fingers to close from above downwards in succession, thus forcing out the milk which the teat may contain through its orifice. The hand is again pressed up and closed as before; and thus, by repeating the action, the udder is completely emptied, without the rough treatment of the teat, which is so apt to engender disease.

MILLER'S-THUMB; Bull head, or Pope—called the first from its size and from its liking to the sharp stream of a mill tail; the second from the largeness of its head in comparison with its body—is an ugly, ill-shaped fish, but very good eating; it is caught with a worm or gentle, and consorts with gudgeon, roach, or barbel.

MINCEMEAT.—There are various recipes for compounding this mixture. The following will be found the best:—1. Take two pounds of raisins, stoned, two pounds of currants, one pound of sultana raisins, ten pounds of apples, three-quarters of a pound of sugar, two pounds of suet, the juice of two lemons, and the rind of one, chopped very fine, a quarter of a pound of mixed spice, a gill of brandy, two ounces of citron, and two ounces of candied lemon-peel. 2. Take two pounds of the fillet of a sirloin of beef, boiled, and freed from skin, together with four pounds and a half of suet, all minced very fine; add eight large apples, chopped, six pounds of currants, washed and dried, two rounds of bread, half an inch thick, grated, an ounce of nutmeg, half an ounce of cloves, a pound and

a half of sugar, and a little pepper and salt; grate the rind of an orange and a lemon, add the juice of six oranges and of two lemons; mix all these ingredients well together, pour over the whole a pint of port wine and a pint of brandy. 3. Take three-quarters of a pound of lean beef, well boiled, and finely mixed, two pounds of suet, chopped small, one pound of moist sugar, one pound of currants, washed and dried, one pound of raisins, stoned and minced, nine apples, the rind of a lemon, grated; season with mixed spice and a teaspoonful of salt, incorporate the whole thoroughly, add a wineglassful of port wine and a gill of brandy. 4. Take a pound each of currants, raisins, ribston pippins, calf's-foot, and pickled ox tongue, the two latter boiled, and the whole finely minced; add half a pound of suet, chopped fine, a quarter of a pound of sugar, half a pound of candied lemon-peel, a pint of port wine, half a pint of brandy, the juice of two lemons, and a teaspoonful of mixed spice.

1. Raisins, 2lbs.; currants, 2lbs.; sultana raisins, 1lb.; apples, 2lbs.; sugar, $\frac{1}{2}$ lb.; suet, 2lbs.; lemons, juice of 2, rind of 1; mixed spice, $\frac{1}{4}$ lb.; brandy, 1 gill; citron, 2ozs.; candied lemon-peel, 2ozs. 2. Beef, 2lbs.; suet, $\frac{1}{2}$ lbs.; apples (large), 8; currants, 6lbs.; bread, 2 rounds; nutmeg, 1oz.; cloves, $\frac{1}{2}$ oz.; pepper and salt, to season; sugar, $\frac{1}{4}$ lbs.; oranges, rind of 1, juice of 6; lemons, rind of 1, juice of 2; port wine, 1 pint; brandy, 1 pint. 3. Beef, $\frac{1}{2}$ lb.; suet, 2lbs.; sugar, 1lb.; currants, 1lb.; raisins, 1lb.; apples, 8; lemon, 1 rind; mixed spice, to season; salt, 1 teaspoonful; port wine, 1 wineglassful; brandy, 1 gill. 4. Currants, 1lb.; raisins, 1lb.; ribston pippins, 1lb.; calf's foot, 1lb.; pickled ox tongue, 1lb.; suet, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; candied lemon-peel, $\frac{1}{2}$ lb.; port wine, 1 pint; brandy, $\frac{1}{2}$ pint; lemon, juice of 2; mixed spice, 1 teaspoonful.

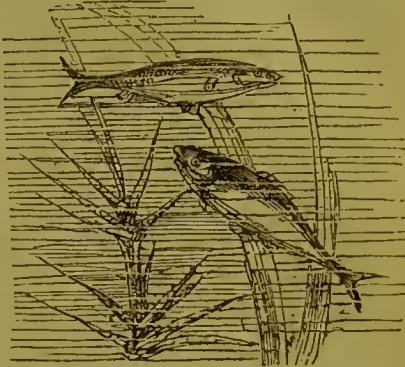
Any of these recipes being prepared, mix the ingredients well together with the hands and put the mixture into jars, tightly pressed down, and well covered. The flavour of the mincemeat will be much improved by being made some few days, or even weeks before it is used.

MINCEMEAT FRITTERS.—Mix half a pound of mincemeat with two ounces of bread crumbs grated fine, two eggs well beaten, and the strained juice of half a lemon. Mix these well together, and drop the fritters with a dessert-spoon into plenty of very pure lard or fresh butter; fry them for seven or eight minutes, drain them on a napkin, and send them very hot to table.

5. Mincemeat, $\frac{1}{2}$ lb.; bread-crums, 2ozs.; eggs, 2; lemon, juice of $\frac{1}{2}$ of 1.

MINT PIES.—Butter some tin pattypans well, and line them evenly with fine puff paste rolled thin; fill them with mincemeat, moisten the edges of the covers, close the pies carefully, trim off the superfluous paste, make a small aperture in the centre of the crust, and bake the pies in a quick oven for half an hour; lay a paper over them when they are partially done, should they appear likely to take too much colour.

MINNOW, OR PENK, is a very diminutive inhabitant of our rivers; and although in some parts it is at certain seasons taken in nets in such numbers as to be made into a cake with eggs and flour, is generally more used as a bait for other fish than as an article of food. The minnow is an elegantly shaped fish, very active and sportive, of a



kind of dappled or waved colour, like to a panther, on its sides inclining to a greenish grey colour, and as the spawning time approaches, of a yellowish tinge, its belly milk white, and its back almost black. The gills of a male minnow at spawning time are frequently ornamented with brilliant scarlet spots. The minnow is caught with a small worm, and gives good sport to those who are satisfied with small fry and plenty of them.

MINT.—There are several species of this plant cultivated in gardens; the principal



are, the peppermint (fig. 1), the pennyroyal mint (fig. 2), the spearmint (fig. 3). All the species are raised by the same methods, namely, by parting the roots, by offset young plants, and by cuttings of the stalks. 1. By the roots.

This is performed in spring or autumn. Select some full roots from any established beds, divide them as expedient; draw out drills with a hoe about two inches deep and six inches asunder, place the roots in the drills, moderately close, and earth them over to an equal depth. 2. By offsets in the spring. Procure those from established plants, and dibble them in rows, six inches asunder. 3. By cuttings of the young stalks in May, June, or advanced summer. Taking the opportunity of showery weather, cut them into lengths of five or six inches, and plant the cuttings by dibble, six inches apart, inserted half way into the earth. Propagated by any of these methods, the plants set in spring or summer will come into use the same year. Water new plants till they take root. Keep them clear from weeds. At the end of autumn, cut away any remaining stems; at which season, or in spring, spread a little loose earth thinly over the beds. For culinary use, or for salads, gather the mint when the young green tops are from one inch to six inches in length, and in their advanced growth throughout the summer. When nearly full-grown in June, July, or August, or beginning to flower, gather a store for winter. Spread the heads thinly in some dry place, shaded from the sun, to be well dried; then, tied in bunches, house the store. When designed for distilling, let them attain full growth, coming into flower; then cut and use the heads immediately. All the species continue by the roots for many years; but when the plants shoot thin and weakly, make a fresh plantation in time.

MINT JULEP.—A beverage first made in America, as follows:—Take three or four young sprigs of mint, fresh gathered, and put into a tumbler; half fill it with sherry; put some pounded ice into a second tumbler, and pour the mint and sherry over it, rapidly transferring the liquor several times from one tumbler to the other; finally place the tumbler on ice for a minute or two, till the frozen particles float over the top. It will then be found a very pleasant and cool drink.

MINT SAUCE.—Chop nine or ten stalks of green mint very small, add a pint of vinegar, and three tablespoonfuls of moist sugar. It will be all the better if made a day or two previous to being used.

MINT VINEGAR.—Put into a wide-mouthed bottle a sufficient number of mint leaves to fill it loosely; then fill up the bottle with good vinegar. After it has been kept stopped close for two or three weeks, pour it off clear into another bottle, and keep it well corked for use. It may be used as a substitute for mint sauce, or for any other purpose.

MIRROR.—See **LOOKING GLASS, TOILET GLASS, &c.**

MISTLETOE.—This plant is found for the most part on the apple tree, but sometimes also on the oak. If its berry be made to adhere to the trunk or branch of either of the foregoing trees, which from its glutinous nature it may be readily made to do, it germinates by sending out a small glo-

bular body attached to a pedicle, which after it requires a certain length bends towards the bark, into which it insinuates itself by a number of small fibres which it now protrudes, and by which it abstracts from the plant the nourishment necessary to its



future development. When the root has thus fixed itself in the bark of the supporting tree, the stem of the parasite begins to ascend, at first smooth and tapering, of a pale green colour, but finally protruding a multiplicity of branches and leaves.

MOCK TURTLE SOUP.—Procure a fresh calf's head with the skin on, take out the brains, wash the head several times in cold water, let it soak for about an hour in spring water, then lay it in a stewpan, and cover it with cold water, and half a gallon besides; remove the scum as it rises; let it boil gently for an hour, take it up, and when almost cold, cut the head into pieces about an inch and a half by an inch and a quarter, and the tongue into smaller pieces. When the head is taken out, put in the stock meat, about five pounds of knuckle of veal and as much beef; add to the stock all the trimmings and bones of the head, skim it well, and then cover it close, and let it boil for five hours; then strain it off and suffer it to stand till next morning, then take off the fat, set a large stewpan over the fire with half a pound of fresh butter, twelve ounces of onion sliced, and four ounces of green sage; let them fry for an hour, then rub in half a pound of flour, and by degrees add the broth until the mixture is of the consistency of cream, season it with a quarter of a pound of ground allspice and half an ounce of black pepper ground very fine; add salt to taste, and the rind of a lemon thinly pared; let it simmer very gently for an hour and a half, then strain it through a hair-sieve; do not rub the soup to hasten it through the sieve; if it does not run easily,

knock the wooden spoon against the side of the sieve; put it into a clean stewpan with the head, and season it by adding to each gallon of soup half a pint of white wine and two tablespoonfuls of lemon-juice; let it simmer gently till the meat is tender, which will be in about three-quarters of an hour; take care that it is not overdone; stir it frequently, to prevent the meat sticking to the bottom of the stewpan. When the meat is quite tender, the soup is ready.

MODELLING.—See CORK, PLASTER OF PARIS, WAX, &c.

MOLASSES.—The thick fluid matter remaining after the sugar is made, resembling syrup. In addition to this substance being eaten by human beings, it is also said to be an excellent food for cattle; and is employed as a safe and economical method of feeding bullocks, sheep, young stock, and cart horses, as well as for milch cows to a certain extent. It is considered best used with roots cut small, and a little meal, well mixed together, with cut straw or inferior hay.

MOLASSES CAKES.—Cut up a quarter of a pound of fresh butter into a pint of molasses; warm it just sufficient to soften the butter, and cause it to mix easily; stir it well into the molasses, and add a tablespoonful of pounded cinnamon. Beat three eggs very light, and stir them gradually into the mixture, with a pint and a half of sifted flour. Add, finally, a teaspoonful of carbonate of soda dissolved in a little warm water. Butter some small tin cake-pans, put in the mixture, and set them immediately in the oven, which should be of a moderate heat, as these cakes are liable to scorch.

Butter, $\frac{1}{4}$ lb.; molasses, 1 pint; cinnamon, 1 tablespoonful; eggs, 3; flour, $1\frac{1}{2}$ pint; carbonate of soda, 1 teaspoonful.

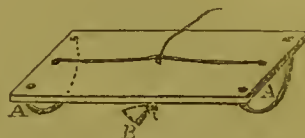
MOLE.—An animal chiefly remarkable for leading a subterranean life. It is from four to six inches in length; the body is thick and cylindrical, the head much prolonged, especially the muzzle, and the legs



extremely short. These little animals are generally regarded as pests, and are suspected of committing great ravages with plants and agricultural produce. To exterminate this animal, it is sometimes considered best to remove the mole hills; these contain nests, which may be destroyed by the spade as follows:—Mark every new mole-hill by a slight pressure of the foot, and observe on the following day whether a mole has passed over it and destroyed such

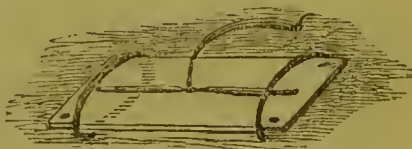
mark; this operation should be repeated two or three mornings successively, but without making the pressure so deep as to alarm the animal, and occasion another passage to be opened. Traps should be then employed, as shown in *figs. 1 and 2*. These traps are made of wood, and may be thus constructed: Take a piece of wood about four inches long, two inches wide, and about half an inch thick. In one side of this wood insert two half circles of wood, as at *A A*, *fig. 1*. Bore a hole through the centre, and

Fig. 1.



also one at each end. Make two loops of wire by simply bending the wire and pinching it through the holes at each end, so as to leave the ends standing up a little way out of the holes, above the surface of the wood, where they are to be tied to a string. In the half circle of wood cut small grooves, and open the wire loops so that the wire may lie in these grooves, then plaster them over with mould. To set the trap, select a tough green stick to act as a spriggle, and tie a piece of strong cord to the end of it. Pass the other end of this cord through the hole in the middle of the trap, and tie a knot in it. This hole must be large enough to allow the knot to pass through easily. A little wedge of wood, as seen in *fig. 2*, is then

Fig. 2.



pushed up between the knot and the wood underneath, so as to keep the knot from slipping through, and two pieces of wood are to be placed across the trap, to keep it down to the ground. The spriggle being fixed in the ground, is now driven down and tied to the string to which the wires are attached. The trap is then to be set in the places previously marked, and when the mole attempts to pass through its run, it is compelled to go through one of the half circles of the trap, and in doing so, it moves the wedge which holds the knot of the string tied to the spriggle. This done, the spring flies up, draws the wire loops tight, and the mole and the trap are by this means both suspended in the air.

MOLE, IN THE SKIN.—The common brown mole, which is so often to be seen on various parts of the human body, appears to be much of the same nature as freckles, and to be situated in the middle layer of the

skin, or membrane of colour. Moles are sometimes so situated as to improve rather than injure a fine face. They contrast with the delicacy of a fair skin, and give a pleasing archness of expression to the countenance. The colouring matter present in moles, is probably some chemical combination of iron; they have evidently abundant vitality, and a tendency to increased action, in consequence, perhaps, of the stimulus of the iron; and hence they are often slightly elevated above the surface, and the natural down of the skin is transformed into a tuft of hair. To attempt to remove these excrescences is dangerous, the application on the face frequently causing cancers to form, in place of the harmless tuft which has been subjected to the operation.—See FRECKLES, SUNBURNS, &c.

MONEY, MANAGEMENT OF.—Money being the all-important medium by which so many transactions are daily and hourly perfected, its proper management so as to occasion the least amount of inconvenience, is a matter worthy of consideration. The keeping of large sums of money in the house or about the person is very injudicious; not only is it liable to be lost, but it tempts servants to commit acts of dishonesty, or becoming more widely known, it affords a cue to desperate characters to commit highway robbery or burglary. Instead of keeping money in this dangerous manner, it should be deposited at a hanker's, cheques upon whom will at any time be cheerfully received as payment of accounts by tradesmen with whom a person regularly deals; whilst money which may be wanted for immediate expenses may be easily drawn in limited amounts, as occasion may require. For domestic expediture, always have a supply of change handy; this will obviate the inconvenience of keeping persons waiting at the door, or sending out at unreasonable times, or troubling other members of the household. If money for daily expenses has to pass through the hands of a domestic servant, it is always better to settle with her every night, and to make up her cash in hand to a similar sum; this will prevent many intricate calculations and puzzling queries. If you set out upon an expedition with other persons, and it is agreed that each shall pay a proportionate share of the expenses, the best plan is for one person to disburse the whole amount, and then to have a final settlement, by which means each may furnish his quota.—See CASH AND CREDIT, ECONOMY, HOUSE-KEEPING, &c.

MONEY ORDER.—A system is established in connection with the Post Office, by which large or small sums of money may be forwarded from one place to another without risk of loss or miscarriage. Every district or town containing a commensurate population, is provided with an office where money orders may be obtained and are made payable. When, therefore, a person wishes to forward a sum of money through this medium, all he has to do is, to repair to the money order office in his locality, giving his own name and address, together with

that of the person to whom the money is to be sent, and also the sum desired to be forwarded. An order is then given, which the person sending the money has to forward to his correspondent, who, upon receipt of the same, signs his name at the foot of the order and receives the amount advised. The fees are threepence for sums not exceeding £2; and sixpence for all sums above £2 and up to £5. No post office order is issued for a larger amount than five pounds, so that if it is desired to send more than that amount, it will be necessary to take out separate orders for the excess. The payment of an order must be obtained before the end of the second calendar month after that in which it was issued, otherwise a new order will be necessary, for which a second commission will be charged. And if the order be not paid before the end of the twelfth calendar month after that on which it was issued, all claim to the money will be lost. The person in whose favour the order is made, need not attend personally to receive the amount, but having attached his signature to the order, any one may be deputed to present it. But, whoever presents the order for payment, must give information as to the christian name and surname of the party who originally obtained it, unless such party comprise a firm, when the name of the firm will suffice. As, however, the post office is not liable to any further claim, when once the money has been paid, by whomsoever the order has been presented, the following cautions should be observed:—1. Never to send the money order in the same letter with the information required on payment thereof. 2. To be careful on taking out a money order, to state correctly the christian as well as the surname, of the person in whose favour the order is to be drawn. 3. To see that the name of the person taking out the money order is correctly known to the person in whose favour it is drawn. Neglect of these instructions will risk the loss of the money, besides leading to delay and trouble in obtaining payment. For the issue of a duplicate money order, for the alteration of the name of the payee or remitter, or for the transfer or repayment of an order, an additional commission is charged, which must be paid in postage stamps enclosed in an application to the comptroller of the money order office, Loudon, Dublin, or Edinburgh, according as the order was issued in England (or Wales), Ireland, or Scotland. For stopping payment of an order, the same fee must be sent to the comptroller of the chief money order office of the kingdom, where the order is made payable; when, however, the same letter includes application both for the stoppage of payment, and for repayment to the remitter, only one fee will be required. The hours for obtaining money orders are usually from ten o'clock to four.

MONKEYS, MANAGEMENT OF.—The keeping of these animals affords a great deal of amusement, but is at the same time attended with some hazard, owing to their mischievous propensities. They may be fed upon bread, and upon fruit of any

kind, nuts, &c. But meat should not be given to them, excepting occasionally, small and delicate boues.

MONKSHOOD.—A perennial plant with a turnip-shaped root, found growing wild in various parts of Britain. Every part of this plant is a virulent poison; and it is all the more dangerous on account of the resemblance which the roots have to that of horseradish, for which esculent it has been frequently taken. A guide to the distinguishing of these two plants, is furnished in the accompanying figure. The stalk of the



plant grows erect to the height of three or four feet. The leaves are lobed, deeply laminated, and stand alternately upon long footstalks; the upper leaves being, however, almost sessile; the upper part dark green, the under part whitish. The flowers terminate the stalk; they are in general a purplish blue or deep violet, and shaped like a helmet or monk's hood; hence its name. Another distinguishing feature in monkshood is, that the scrapings assume a pinkish colour when exposed to the air, while the taste is acid instead of being pungent; the non-discovery of this latter peculiarity in instances where monkshood has been eaten by mistake, is on account of the vinegar which has been used with it. In cases of poisoning by this plant, the best mode of treatment is the immediate and free administration of animal charcoal mixed with water; this to be followed by a zinc emetic, then by brandy and ammonia. The charcoal has the power of retaining and separating the poisonous alkaloid, and thus stops the further action of the poison.

MONTROSE CAKE.—Wash a pound of butter in a little orange-flower water, and beat it to a cream; then mix into it by degrees, a pound and a half of powdered loaf sugar, and sixteen eggs well beaten; add a pound of well-dried flour, half a pound of sweet almonds blanched and pounded in a little rose water, and two

ounces of caraway seed; beat the whole well together for half an hour, pour it into a buttered tin, lined with buttered paper, and bake it in a quick oven for two hours.

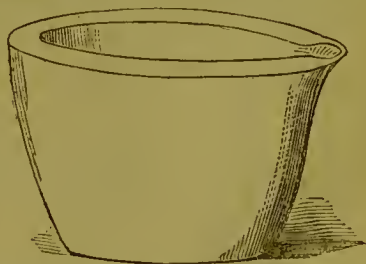
Butter, 1lb.; orange-flower water, sufficient; sugar, 1½lb.; eggs, 16; flour, 1lb.; sweet almonds, ½lb.; caraway seed, 2ozs.

MOOR-GAME.—These birds require to be kept for some time, and to be well dressed, otherwise they will be tough and comparatively flavourless. They should hang, therefore, until they arrive at that condition which indicates their being ready for the spit. Pick and draw them with exceeding care, as the skin is easily broken; truss them like pheasants, place them at a moderate distance from a clear brisk fire, baste them plentifully and constantly with butter, and serve them on a thick toast which has been laid under them in the dripping-pan for the last ten minutes of their roasting. Send rich brown gravy and bread sauce to table with the birds. From three-quarters of an hour to a full hour will roast them.

MOREEN CURTAINS, TO CLEAN.—Having removed the dust and clinging dirt as much as possible with a brush, lay the curtain on a large table, sprinkle on it a little bran, and rub it round with a piece of clean flannel; when the bran and flannel become soiled, use fresh, and continue rubbing till the moreen looks bright.

MORTAR, FOR BUILDING.—A cement employed to unite stone and bricks, and composed of quicklime, sand, and water. In making mortar, fresh sand from a pit is to be preferred to that taken from the sea-shore, the salt of which is liable to keep the building moist, and to weaken the strength of the cementing property. The more sand that can be incorporated with the lime the better, provided the necessary degree of plasticity be observed; for the cement becomes stronger, and it also sets or consolidates more quickly when the lime and water are less in quantity and more subdivided. The purer the lime, and the more thoroughly it is beaten or worked over, the more sand will it take up, and the more firm and durable will it become. Mortar for paving is improved by mixing the residuum of the distillation of aquafortis.

MORTAR.—An implement employed for reducing substances to powder, and for



mingling various ingredients together. Mortars are made of various materials—iron, brass, marble, glass, wedgewood ware, &c., the last being by far the most generally

useful and quite sufficient for all domestic purposes. The wedgewood mortar is generally made of the form seen in the engraving, that size capable of holding about a pint, will be found most convenient for domestic use. The great advantage of the wedgewood mortar is, that whilst much stronger than glass, it is not, like marble or metal, acted upon chemically by different agents. In every case the mortar should be well cleaned and wiped dry, when it is done with; and should be dusted out previously to being again used.—See PESTLE.

MORTGAGE.—The act of pledging houses, land, &c., as security for money borrowed. It is usually accompanied with a proviso that if the principal lent, with interest thereon, be not repaid by a certain period, the property shall revert to the mortgagee, to be sold by him in satisfaction of his claim. When a person is about to borrow money on mortgage, he should do it through the medium of a respectable solicitor, for in this department of money-lending there are a number of persons engaged, whose mode of transacting business is based upon obtaining every advantage themselves at the expense of the person to whom the money is lent.—See LEASE.

MORTIFICATION.—The total death of any part of the living body, or that condition when any member or part loses its vitality, and when the circulation and other functions carried on, cease. In this case, the part loses its natural warmth and sensibility, feels moist and inelastic, becomes livid or streaked with dull purple patches, and small bladders or vesicles appear on the cuticle; this, after a time, becomes black and putrid, and a process sets in around the dead part by which it is detached from the healthy parts, and ultimately, the mass or member is thrown off in what is called a *slough*. Mortification is in general caused by some excessive inflammation, such as erysipelas, interruption of the circulation, caused by a tight bandage or ligature, mechanical injuries, intense cold, eating of poisonous food, such as diseased rye, and sometimes in old people, from poor living and an enfeebled circulation, when the foot or both feet mortify, and the shock to the system almost always proves fatal. When mortification supervenes on inflammatory action, it is attended with rapid prostration of the strength, the pulse is quick and feeble, the face pale and anxious, the spirits depressed, a cold sweat bedews the body, and a sharp irregular hiccough indicates approaching death. When only a part, however, is affected, the constitutional disturbance is much less severe, though the feeble pulse, and languid countenance generally indicates the bodily sympathy. The mortification of old age usually comes on with the presence of a black or purple spot on some part of the foot, or under one of the toes; but in whatever part it first shows, it gradually extends its discoloration, till the whole member or limb is involved; sometimes there is much pain, but often no sense of suffering whatever, the patient being unconscious of any ail-

ment in the part beyond the absence of heat. The system, however, rapidly succumbs, the patient falls into a state of lethargy, which eventuates in coma, and death.

The *treatment*, in ordinary mortification, must depend upon the stage of the disease; when the inflammatory action is strong, bleeding and purgative medicines must be employed; but, when that condition is passed, and the weak, quick pulse indicates the coming debility, the patient is to be fed with rich animal food; wine, bark, and opium are to be given, and as often as necessary the system roused by diffusible stimuli, such as brandy, ammonia, and ether. For the mortification of old age, the first step to adopt is, to apply heat to the extremities, by bottles of hot water, and either a warm bran poultice over the foot, or the member enveloped in a powder, made by mixing one part of dry mustard with two parts of flour, or by putting the foot into a stocking partly filled with such a dry mixture, so as to keep up a steady surface heat, and reactionary stimulus. At the same time that these local means are adopted, the vital powers must be raised, and supported in their accelerated action by doses of the following mixture, and the judicious employment of wine, strong beef-tea and toast, eggs, and other light and substantial aliment; the great point being to supply quantities of such food every two, and not longer than every four hours. Take of

Carbonate of ammonia . . .	1 scruple.
Dover's powder . . .	$\frac{1}{2}$ drachm.
Camphor water . . .	6 ounces.
Aromatic tincture . . .	1 ounce.
Sulphuric ether . . .	1 drachm.

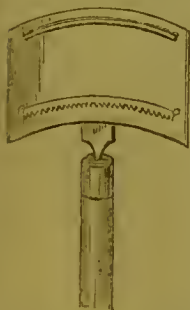
Mix. Two table-spoonfuls to be given every four hours, or one spoonful every hour, according as the patient is robust or feeble. After the first two days, quinine may be given, made into pills in half-grain doses, three times a day; and as far as possible the body kept in a state of warm perspiration, by means of hot bricks, or bottles of water placed about the bed, in near proximity to the patient. When sloughing sets in, the process is to be assisted by warm poultices, and to destroy the fetid odour, the part occasionally washed with a solution of chloride of lime.—See FROST BITE.

MOSQUITO.—A gnat-like insect, common in America and the West India Islands. The stinging qualities of these insects are most annoying. The animals are furnished with a proboscis for piercing the flesh, and at the same time forming a kind of syphon, by which means a poisonous matter, which causes inflammation, is injected into the wound. Europeans, on first arriving in the localities infested by these insects, are especially liable to be attacked by them. To allay the inflammation, the parts affected should be bathed frequently with a solution of opium in water, or with the *liquor plumbi acetatis*, sufficiently diluted. At the same time a cooling purgative should be taken, and the diet should be temperate. Persons who habitually suffer from mosquito bites, should wear gloves and long linen trousers

by day, and by night they should sleep under cover of a net, which being made of thin lawn, is cool and affords an effectual protection.

MOSS, CULTURE OF.—In raising moss from seed, these, being very small, should be sown on the surface of peat earth, ground to the finest powder; the seed need not be covered, but the pots should be placed in the shade, or in a vault, and a moist close atmosphere produced, by covering with a bell-glass rendered semi-opaque by a thin smearing of mud. When the plants come up, they may be transplanted into pots of the smallest size, and placed in situations formed in imitation of their natural sites.

MOSS, TO PREVENT AND REMOVE.—The appearance of moss upon plants, lawns, or pasture lands is regarded by the horticulturist and agriculturist as an unfavourable omen, and as a hindrance to the development of vegetation. To prevent the growth of moss on pasture lands is a matter of great difficulty. Drainage, and the employment of rich composts are indispensably necessary. Harrowing and cross-harrowing with a common harrow, or with what are called grass-harrows, are the most likely means of destroying the moss and improving the pasture. Feeding sheep with oil-cake and allowing them to pasture on the land, has been also found effectual for the destruction of moss. But the radical remedy is to plough up such grass lands upon the first appearance of the moss, or before it has made any considerable progress, and to sow them with corn. To remove moss from lawns, water them with gas-water; or, if this cannot be done, use a good top-dressing of guano mixed with one-third of sulphate of ammonia. To prevent moss attacking fruit trees, and vegetation generally, drain the land to the depth of four feet, and then give the land a little manure; the trees will clean themselves. But if persons cannot wait patiently while this natural operation is being performed, the best way is to scrape the moss off the trees and burn it. The twigs need not be meddled with; the operation being confined to the trunk and main branches. For this process, the best instrument is a moss-scraper, as seen in the engraving,



boiling state, as will form the ingredients into a thick paint, and lay it on with a brush.

MOTH. This insect commits great ravages on both furniture and wearing apparel. To prevent these attacks, the former periodically, and the latter before they are put by, should be beaten with a cane in the open air; then dissolve a drachm of camphor in two ounces of spirit of wine, and sprinkle each article plentifully with this mixture, which will not injure the most delicate colour; the smell will go off after an hour's exposure to the air, when the article which has been sprinkled is required for use. For furs and woollen articles, the only precaution necessary, is to expose them to the air for a few hours from time to time, and the security will be greater if the articles are wrapped up in linen, closely pinned or sewed.

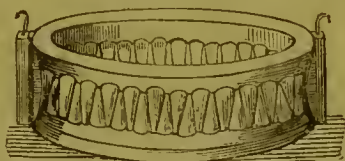
MOTHER.—See CHILDREN, DISCIPLINE OF; CHILDREN, DISEASES OF; CHILDREN, MATERNAL MANAGEMENT OF; INFANT, &c.

MOTHER-OF-PEARL.—This beautiful substance is produced in the shell of the oyster, from the same constituents as those which line the shell. It usually results from some irritation of the mantle, which causes it to excrete an unusual quantity of pearly matter at one spot. Sometimes, again, pearls have been found at points where the shell has been pierced by a boring mollusc. To clean articles of mother-of-pearl, wash them in whiting and water.

MOULD, FOR PLANTS.—Most of the hardy flowers and shrubs will thrive very well in common garden-mould, of a medium texture; it is to be well dug and pulverized to the depth of a foot. Bulbous plants, generally speaking, require a light sandy soil, though some of them succeed best in a strong rich loam. If it can be possibly avoided, flowers should not be planted in a clayey soil, nor a pure gravelly one. When the finer descriptions of flowers are cultivated, a variety of artificially formed soils will be required, according to the different natures of the plants; consequently, provided the subsoil be dry, the material of the surface-stratum is of less consequence.

MOULDS.—Under this name are included several culinary utensils, in which materials

Fig. 1.



are to be baked or otherwise prepared, or by which their substance is economized, and they assume a slightly shape. These utensils are made in every variety of form; those seen in the engraving represent a raised pie mould (fig. 1);

Fig. 2.



bun mould (fig. 2).

In using moulds for cakes, they should be

greased on the inside, so that the contents may be turned out without breaking; and in every case, when moulds are finished with, they should be scrupulously cleaned, and preserved in that state until they are again required.

MOUERNING, ETIQUETTE OF.—The various degrees of relationship which the living bear to the dead, regulate the depth of the mourning worn, and the length of time that it is to be retained. Mourning for a husband in the widow's cap and crape is usually extended over twelve months, and after that period the wearer may either adopt a half mourning, or put by mourning altogether, without appearing singular or wanting in feeling. In cases of this kind, the wearing of mourning beyond the prescribed interval depends, as a matter of course, greatly upon sentiment, the degree of affection which subsisted between the parties, the length of time which the marriage existed, &c. Mourning for parents is usually worn with crape for six months, afterwards without crape for the same period. For a brother or sister, six months; but in many cases for a longer period. For an uncle or aunt, three months; the same for a first or second cousin. Male attire, however, is not subject to very stringent rules; black is always expensive wear, and sometimes a person's pursuits and avocations will not permit him to wear it. The most prominent article in mourning with males, is the hat. For this purpose hat-bands of cloth are now made of various depths, as required. For a wife, the hat-band should, in the first months of mourning reach to the extreme verge of the hat, and be gradually reduced in depth as time passes by. For a parent, the hat-band should reach to within two inches of the crown, and so in proportion according to the degree of relationship. Pocket-handkerchiefs used during the period of mourning should be white, not coloured. Little or no jewellery should be displayed when persons are in deep mourning, the sombreness of the one, and the ostentation of the other, are incongruous. During the first few weeks for very near relatives, it is customary to observe comparative seclusion, balls, theatres, concerts, parties, &c., being alike unvisited. Custom, in general, only exacts the adoption of mourning from the relatives of deceased persons, but there are occasions when friendship may evince a proper delicacy in such a matter, not only out of respect to the departed, but in consideration of the survivors. Thus, if a person be going to visit a family, with the members of which he is on the terms of the closest intimacy, and who have recently experienced a heavy bereavement, such visitor, instead of appearing in coloured clothes, should dress in black. In England, when the monarch of the realms dies, every person who aspires to move in what is termed the better class of society, is expected to appear in slight mourning for a prescribed period; or rather it may be taken in a negative sense, that is to say, if during the period of national mourning a person

were to appear in many-coloured apparel, he would be considered as offending greatly against good taste and manners. Written correspondence during the interval of mourning is conducted on paper and with envelopes bordered with black; the depth of the border is regulated in the same way as are the elotics that are worn. When sealing-wax is called into requisition, it should be black. Visiting cards are, upon the same principle, edged with black.

MOUSTACHE.—This facial ornament is now more extensively adopted in England than it was formerly; it is said to afford protection to the lungs by acting as a sort of strainer, and intercepting particles of dust, and other agents inimical to the breathing apparatus. The growth of the moustache depends greatly upon constitutional tendencies; sometimes a youth of eighteen will display a bushy appendage on his upper lip, while another person who has long passed the period of manhood will only succeed in displaying a few straggling hairs. The growth of the moustache may, however, be encouraged by clipping the extreme tips of the hairs from time to time, and by applying to it those specifics, and putting it under that treatment, which are recommended in the articles **BALDNESS**, **HAIR**, &c.

MOUTH, AFFECTIONS OF.—No portion of the body, in so small a compass, contains so many varieties of structure as the mouth; and though seemingly alike in their general appearance, each, anatomically, is remarkably different in organisation from even its most adjacent structure. These several parts, or minor organs, are: the lips and cheeks, the palate and tongue, the gums and teeth, the uvula and fauces behind, and the salivary glands all round.

Except from accident, such as the inhalation of scalding steam, the application of boiling water, or corrosive acids, most of the diseases affecting this series of parts may be said to be sympathetic or the result of constitutional disturbance, or diseases of the digestive organs, such as an acute or chronic inflammation of the stomach, or mucous membrane of the alimentary canal; and is generally indicated by a papillary eruption of the mouth, thickening of the lining membrane, with a swelling and abraded state of the lips. Of such affections, the greater number appertain rather to the period of infancy and childhood than that of adult or old age. From birth till after teething, children are very subject to what are called *erythematous* affections of the mouth, either marked with great heat and redness of the mouth, accompanied with a congested state of the mucous membrane, and a dry red tongue, with more or less of fever; or else it assumes the appearance of small white spots, covering the lips and tongue; or that organ is entirely covered with a membranous lining, which, from the excess of bile in the system, is usually of a brown or yellow colour, and sometimes the whole of the mouth, as well as the tongue, is covered with the same hardened exudation. In this case, the voice is affected, making the child's cry sound hoarse and dull.

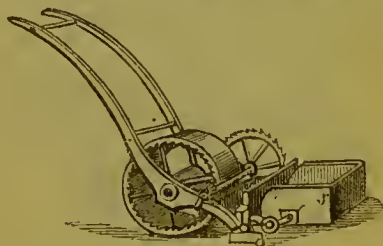
The *treatment* in most of such cases is nearly always alike and very simple, and consists in giving an aperient powder once or twice a day, to correct the unhealthy state of the stomach and bowels; and where the mouth and fauces are unusually loaded with this membranous fur, the mouth is to be washed with an infusion of rose leaves, or with a weak solution of chloride of lime. The best aperient powders for infants, in such cases, are those composed of grey powder, scammony, and jalap, either in equal quantities, or composed of one part of grey powder with two parts of the other ingredients, according to the age and strength of the child. When the congestion is obstinate, and the fever continues unabated, a small oleaginous mixture should be made, by rubbing two drachms of castor oil with enough mucilage and dill water to make an ounce and half, to which eight drops of laudanum are to be added; and a teaspoonful of this mixture given to the child three times a day, if the patient is twelve months old; under that age, half a teaspoonful; and when older, the dose is to be regulated in the same proportion. But by far the most important disease with which the mouth is affected, is the well-known condition called *aphthæ*, or thrush, a very frequent and painful disease affecting the delicate membrane of the mouth of adults; it is the formation of one or two small round ulcers, situated between the inside of the lip and the gum, and which continue for several days, causing a considerable amount of pain. As this uncomfortable ulcer is the consequence of some derangement of the bowels, the best remedy is a compound rhubarb pill, taken night and morning for two or three days; at the same time, a few grains of powdered loaf-sugar placed in the ulcers, will excite the vessels, and by the irritation produced promote absorption. The salivary glands become sometimes inflamed and enlarged, as in mumps, when they must be treated by the same means recommended in that disease.

For the foetid breath and unpleasant taste so often experienced in the mouth, the most effectual remedy is a daily draught of wormwood tea for the first, and an aperient pill night and morning till the cause is removed.—See THURSH.

MOVING.—See REMOVING.

MOWING.—This is one of the most laborious of agricultural and gardening employments. The chief art consists in cutting the crop as close to the surface of the ground as possible, and perfectly level, pointing the swaths well out, so as to leave scarcely any ridges under them. In the mowing of grain crops, scythes shorter in the blade than the common ones are made use of; they are also furnished either with a cradle or two twigs of osier put semicircular-wise into holes made in the handles near the blades, in such a manner that one semicircle intersects the other. Commonly, in mowing barley, oats, or other grain, the corn is on the right hand of the workman. After every mower, a gatherer follows within about five or six feet distance, and gathers up the

corn into parcels. To do this work properly, the mower should form but one track with his feet, one foot chasing the other. In the practice of most districts, the scythe is swung horizontally or nearly level, leaving the stubble of almost an equal height. The Kentish practice—in which county, mowers excel—is somewhat different. Here the workman proceeds with his right foot forward, entering the point of his scythe with a downward stroke, and raising it as abruptly out, bringing the handle round to the left until it forms nearly a right angle with the line of the swath, carrying the corn in the cradle three or four feet behind the place where it grew, lifting it high and letting it fall behind his left foot. The disadvantages of this method are, the loss of some straw, the incumbrance arising from the length of stubble, and a little additional labour; but in districts where cattle is not abundant, these drawbacks are comparatively unfelt. For mowing lawns, meadows, &c., a machine has been invented, as represented in the engraving. This machine cuts, collects, and rolls the grass at one and the



same time. The operation of mowing is most easily performed whilst the blades of grass are wet, as they then cling to the scythe, and are consequently erect against its cutting edge. The operation, therefore, should be performed early in the morning, before the dew has evaporated, or whilst the grass is wet from rain or artificial watering.—See SICKLE, SCYTHE, &c.

MUFF.—An article appertaining to a lady's wardrobe, at present but little worn. For preservation of, see FURS.

MUFFIN PUDDING.—Split in halves as many muffins as may be required, and having put into a tin shape a layer of any sort of preserve, lay over it a layer of muffin, then another of preserve, and so on alternately until the shape is filled; pour over it some warm milk, in which four or five eggs have been previously beaten up; cover the shape, and set it in a saucepan of boiling water; let it boil in this manner for twenty minutes, then turn it out, and serve with sweet sauce.

MUFFINS, TO MAKE.—Strain into a pan a pint of warm milk and a quarter of a pint of thick small-beer yeast; add sufficient flour to make the whole into a batter; cover it over, and let it stand in a warm place until it has risen; then add a quarter of a pint of warm milk, and an ounce of butter rubbed in some flour quite fine. Mix

these well together, then add sufficient flour to convert it into dough; cover it over, and let it stand for half an hour; then work it up again and break it into small pieces; roll them into a round form, and cover them for a quarter of an hour. Next, begin baking; and when laid on the iron, watch them carefully, and when one side changes colour, turn the other, taking care that they be neither burned nor discoloured. Be careful also that the iron does not become too hot. In order to bake muffins properly, a place should be built as if a copper was to be set; but instead of the copper, a piece of iron must be put over the top, fixed in form like the bottom of an iron pot, underneath which a coal fire may be kindled when required.

MUFFINS, TO TOAST.—Muffins should be toasted gradually; otherwise they become heavy. First hold one side of the muffin to the fire, then the other, so that it may become warmed through; then pull the muffin out, and toast each side in turn; when done, slip in the butter and set the muffins by the fire one on the top of the other; touch them as little as possible with a knife, as this causes them to become heavy.

MULBERRY, CULTURE OF.—This tree may be propagated by seed, layers, cuttings,




or grafting. The first is the least advisable mode, unless for stocks to in-arch upon. Layers will generally take root sufficiently the first year to bear separating from the parent tree, and should then be planted in a nursery, and trained up with single stems. In four years they will be fit to plant out where they are to remain. They should be planted at a proper distance to admit the sun and air, as the fruit, when the trees are too close, is apt to become mildewed; they should also be sheltered from the east, west, and north winds. In raising mulberries from cuttings, choose the former year's shoots, having one joint of the two-year-old wood. Plant them in autumn, if fine weather, or in the month of March, in rows nine inches apart, and at a distance of two inches in the rows, leaving only two or three buds above ground: prepare the ground with manure, and water the plants but little. If they succeed well, they may, next season, be transplanted into a nursery, and trans-

planted as directed for layers. These young trees, while they remain in the nursery, should be transplanted every three or four years. When propagated by grafting, the young mulberry trees are planted in pots, raised to the bearing branches of old trees, and grafted by approach. The soil most suitable for the mulberry is a rich light earth, and where there is a good depth. The best season for pruning is, when the blossoms first become visible in the spring. Pinch off every barren shoot which is not wanted to cover the wall, and stop every bearing shoot under similar circumstances, at the third or fourth leaf. The most forward berries attain maturity about the end of August; and there is a succession of ripening fruit on the same tree for about a month or six weeks. The ripening berries gradually change from a red to a black colour, and should be gathered accordingly for immediate use. This delicate fruit will not keep good off the tree above a day or two.

MULBERRY LEAVES.—These form the chief food of silkworms. The leaves must not be gathered from the mulberry until the trees are well-grown, when those which are youngest, and bear fruit regularly, should be selected, and the stripping made complete by passing the hand along the branches from bottom to top. The chief point to be attended to is, to leave the eyes from which the new branches spring, uninjured. A tree must on no account be stripped twice in the same year. The leaves, when gathered, should be carried away in damp bags, and kept in a cool dark place, being slightly watered if they appear faded. The best time for gathering them is early in the morning before the dew has disappeared.

MULBERRY PRESERVE.—Choose large and very ripe mulberries, put them gently into some strong syrup, and let them boil, covering over the pan, and shaking it gently from time to time; then take them off the fire, skim the syrup, and let it stand for two hours; then put the pan over the fire again, and let the contents boil until the syrup has become exceedingly thick; put by in pots securely covered.

MULBERRY RATAFIA.—Take half a pound of red currants, three pounds of ripe mulberries, and half a pound of raspberries; put them for a very short time over the fire; then set by the juice with half a drachm of mace, to infuse for three weeks in two gallons of brandy; then dissolve three pounds and a half of loaf sugar in a pint of water, mix this with the brandied juice, filter the whole, and pour into bottles.

 Red currants, $\frac{1}{2}$ lb.; mulberries, 3 lbs.; raspberries, $\frac{1}{2}$ lb.; mace, $\frac{1}{2}$ drachm; brandy, 2 gallons; sugar, 3 $\frac{1}{2}$ lbs.; water, 1 pint.

MULBERRY SYRUP.—Select mulberries which are very ripe, put them into a saucepan and let them break over a slow fire; pass them through a sieve, so as to extract the juice; let it run through a jelly-bag, add to it a quantity of very strong syrup, in the proportion of two pounds of sugar to a pint of juice; keep this near the fire until it is reduced about one-fourth, and when cold pour into bottles.

MULBERRY WINE.—To every gallon of mulberries add the same quantity of water. Only a small portion of the berries should be bruised at one time, that they may be done more effectually. The water is then added, and allowed to remain on the fruit for forty-eight hours, stirring well night and morning during that time, when they are to be squeezed and strained, and the juice measured into the fermenting tub. Add to each quart of juice a pound and a quarter of sugar, and proceed as with other wines.

MULBERRIES, PRESERVED DRY.—Gather mulberries when they are scarcely ripe, and give them a boil in syrup; then let them stand for twenty-four hours near the fire, so as just to keep warm; at the end of this time, take them out, drain them, and put them upon tins, powdering them well with fine sugar, and exposing them to the sun; when they are dry on one side, turn them, powder them in the same way, and finish the drying.

MULBERRIES, USES AND PROPERTIES OF.—This fruit is brought to the dessert, and recommends itself by its highly aromatic flavour and abundant sub-acid juice. It enters but little into pastry in a distinct form, but gives an additional flavour to some of the other fruits. It is very wholesome, cooling, and rather laxative; it does not undergo acetous fermentation, and may be, therefore, safely eaten by gouty and rheumatic persons. The syrup, used as a gargle, is beneficial in cases of sore throat.

MULE.—A hybrid animal between the horse and the ass, differing in size, strength, and form, according to the predominance of its parental species; those between a mule-ass, and a mare, being far superior to the progeny of a she-ass and a horse. In mountainous countries mules are highly serviceable, no beast of burden being either so sure-footed or so capable of enduring fatigue. They are sometimes fifteen or sixteen hands high, thick set, and capable of travelling for months together with six or eight hundred-weight on their backs.

MULLED WINE.—Add to a quart of wine a pint of water and a tablespoonful of allspice; boil them together for a few minutes; beat up six eggs, with sugar added to taste; pour the boiling wine on the eggs, stirring it all the time. Be careful not to pour the eggs into the wine, or they will curdle.

Wine, 1 quart; water, 1 pint; allspice, 1 tablespoonful; eggs, 6; sugar, to taste.

MULLET.—A fish of which there are several kinds, the grey mullet and the red mullet (*fig. 1*) being the best known. The grey mullet (*fig. 2*) is commonly an inhabitant of the Mediterranean and northern seas, where it is chiefly found frequenting the shallow water near the shores. In the spring and early summer months this fish ascends rivers to a considerable distance, and when preparing for these expeditions, is observed in shoals near the surface of the water. They rise freely at the flies used for trout, and when hooked, require great care in the

management of them, as they are strong in the water, and plunge violently. They are

Fig. 1.



fond of resting in the sand or soft mud, in search of food. The red mullet is caught

Fig. 2.



chiefly in the Mediterranean; it is of a smaller size than the species just described, and is considered very delicate food.

MULLET BAKED.—Remove the gills only, without interfering with the liver and tail; bake the fish for about half an hour in a moderately heated oven; season them well; and cover them with chopped mushrooms, shalots, chives, or truffles, together with parsley and sweet herbs of any sort; put them into a dish of brown gravy, with a gill of either white or red wine; baste them frequently, and when done squeeze a little lemon-juice over them and serve.

MULLET BOILED.—After cleaning the fish thoroughly, boil them in salt and water, and put to the remainder of the water, after pouring away a part, a pint of port wine, some salt and vinegar, two onions sliced, with a bunch of sweet herbs, some nutmeg, pounded mace, and the juice of a lemon; boil these well together with two or three anchovies; then put in the fish; when they have simmered for some time, dish them, strain the sauce over them, and serve.


MULLET BROILED.—Remove the gills, and wipe the fish with a dry cloth from head to tail; flour them; butter well half a sheet of butter paper, season it with pepper and salt; rub a little butter over the mullet and season it; envelope the fish in the paper, fasten the ends securely, and broil it for twenty minutes; serve in the paper.

MULLET FRIED.—Scale and gut the


fish; melt some butter, and pour it into a deep dish; score the mullet across the back, and dip them into the butter; then set some butter over the fire in a stewpan; let it clarify, fry the mullet in it; when they are done serve on a hot dish, with melted butter and anchovy.

MULLET STEWED.—Put three mullet into a shallow stewpan with a wineglassful of sherry, a teacupful of broth, an onion, a carrot, and a turnip sliced, two bay leaves, a blade of mace, a sprig of parsley and of thyme, two slices of lemon, and a little seasoning; stew the fish gently for twenty minutes; dish them; strain the sauce, thicken it with flour and butter, pour it over the fish, and serve.

MULLIGATAWNY SOUP.—Cut four pounds of breast of veal into pieces, about two inches by one; put the trimmings into a stewpan with two quarts of water, adding twelve corns of black pepper, and the same of allspice; when the liquor boils, skim it clear, and let it boil for an hour and a half, then strain it off; while it is boiling, fry the pieces of veal with four onions in butter, until they are brown; this done, put the broth to them, and set the mixture over the fire; when it boils, skim it thoroughly; let it simmer for half an hour, then mix two tablespoonfuls of curry, and the same of flour, with a little cold water and a teaspoonful of salt; add these to the soup, and simmer it gently till the veal is quite tender, then dish and serve.

 Veal, 4lbs.; water, 2 quarts; pepper-corns, 12; allspice, 12 corns; onions, 4; butter, sufficient; curry, 2 tablespoonfuls; flour, 2 tablespoonfuls; salt, 1 teaspoonful.

MULLIGATAWNY SOUP, OF VEGETABLES.—Dissolve, in a large stewpan, or thick iron saucepan, a quarter of a pound of butter, and when it is on the point of browning, throw in four large onions shred, three pounds weight of young vegetable marrow, cut in large dice, and cleared from the skin and seeds, four large cucumbers pared, split, and likewise freed from their seeds, and from three to six large acid apples, according to taste; stew these over a gentle fire until they are tolerably tender, shaking the pan often. Then strew lightly over, and mix well amongst them, three tablespoonfuls of curry powder, and one tablespoonful of salt; then let the vegetables stew for half an hour longer; this done, pour on to the vegetables gradually, sufficient boiling water to just cover them, and when they are almost reduced to a pulp, press the whole through a hair sieve with a wooden spoon, and beat it in a clean stewpan, with as much additional liquid as will make two quarts with that which was first added. Give any flavouring required, whether of salt, cayenne, or acid, and serve the soup very hot.

 Butter, ½lb.; vegetable marrow, 3lbs.; onions, 4; cucumbers, 4; apples, from 3 to 6; curry-powder, 3 tablespoonfuls; salt, 1 tablespoonful; water, 2 quarts; seasoning, as required.

MUMPS.—A painful glandular affection of the principal salivary organ of the mouth, the *parotid gland*, which is indicated by

a swelling in the throat under the jaw, either on one side of the neck, or extending across to the throat, and is at first circumscribed and moveable; it in a day or two becomes hard and diffused, attended with great inconvenience in speaking, and some difficulty and pain in both mastication and swallowing. Though seldom accompanied with fever, or constitutional disturbance, it not unfrequently produces slight headache, and is more or less attended with enlargement of the neighbouring glands of the jaw and ear. The disease generally lasts from four to six days, though the subsidence of the swelling generally begins to be conspicuous at the former date. The treatment is remarkably simple; a warm bran poultice kept constantly over the swelling, and the exhibition of one or two compound rhubarb pills—or, if a child, a mild aperient of grey powder and scammony; or a wineglassful of senna and manna tea—is all that is, with rare exceptions, required; for, as the swelling is harmless and temporary, it is seldom that any stimulant application is necessary, or even proper. A peculiarity, and a beneficial one, however, is observable in this disease upon its subsidence, which, though it may appear as if the annoyance would be general and of long continuance, is however a beneficial remedy, and has been always found to act favourably for the patient—this is a sympathetic swelling of the gland of the breast, in females, and in the inguinal region, in males, upon the disappearance of the mumps; but as neither requires any special treatment, the knowledge of the fact is only necessary to guard against any needless alarm. When, however, as in scrofulous habits, the swelling of the mumps continues for some time, and remains at the end of a week hard and undiminished, it should be gently rubbed with camphorated oil night and morning, and again covered with the poultice; and in such cases an extra dose of the aperient pills, powder, or draught given. A few applications of the camphor will cause absorption and effect a cure, in those cases where such extra treatment is deemed necessary.

MURRAIN.—A contagious disease amongst cattle, principally caused by a hot dry season, or rather by a general putrefaction of the air, which begets an inflammation of the blood and a swelling in the throat, which, in many instances, soon proves mortal. The symptoms are, a hanging down and swelling of the head, abundance of gum in the eyes, rattling in the throat, a short breath, feeble pulse, palpitation of the heart, tenderness of the spine, a staggering motion, and shivering tongue. The treatment of this disease must be governed by surrounding circumstances. The early stage of murrain is one of fever, and the means of cure should correspond with this—bleeding; physic should be cautiously, yet not timorously, resorted to; small doses of purgative medicine, with more of the aromatic than is generally added, will be serviceable, effecting the

present purpose, and not hastening or increasing the debility which generally threatens. But if the bowels are sufficiently active, or diarrhœa is imminent, and at the same time symptoms of fever are apparent, no purgatives should be given, and the sedatives must be mingled with some vegetable tonics. In combating the pustular and sloughing gangrenous stage, the chloride of lime will be the best external application; while a little of it administered with the other medicines internally, may possibly lessen the tendency to general decomposition. The external application of it should be confined to the ulcerated parts alone, but it should be plentifully sprinkled over and about the beast; and the infected animal should be immediately removed from the sound ones.

MUSHROOM, CULTURE OF.—The culture of the mushroom is the most singular and curious of any of the processes in gardening. In other cases we either sow or plant something material, but in this instance we commit nothing to the earth of a vegetative tendency that is visible to the naked eye. It would appear that animal manure is necessary to the spawn of mushrooms; and thus the droppings of horses are found to produce mushrooms more abundantly and with greater certainty than the droppings of any other animal. The active principle in the growth of mushrooms is the spawn; this is a white fibrous substance, running like broken threads in such material as is fitted to nourish it. These threads produce, when planted, tubercles in the manner of potatoes. The process of culture ordinarily adopted is as follows:—About the end of September, a quantity of horse droppings which have accumulated from the adjacent stable, should be collected and thrown together in a heap to ferment and acquire heat; and as this heat generally proves too violent at first, it should, previously to making the bed, be reduced to a proper temperature by frequently turning it in the course of a fortnight or three weeks; which time it will most likely require for all the parts to receive an equable state of fermentation. During the above time, should it be showery weather, the heap will require some sort of temporary protection by covering it with litter, as too much wet would soon deaden its fermenting quality. The like caution should be attended to in making the bed, and after finishing it. As soon as it is observed that the fiery heat and rank steam of the dung are gone off, a dry and sheltered spot of ground should be chosen, on which to make a bed. The place being determined on, a space should be marked out five feet broad, and the length (running north and south) should be according to the quantity of the mushrooms likely to be required. If for a moderate family, a bed twelve or fourteen feet long will be found (provided it takes well) to produce a good supply of mushrooms for some months. On the space marked for making the bed, a trench should be thrown out about six inches deep; the mould may be regularly laid at the side, and if good, it will do for

earthing the bed hereafter; otherwise, if brought from a distance, that of a more loamy than a sandy nature will be best. Either in the trench, or upon the surface, there should be laid about four inches of good dung, not too short, for forming the bottom of the bed; then lay on the prepared dung a few inches thick regularly over the surface, beating it as regularly down with the fork; continue thus, gradually drawing in the sides to the height of five feet, until it narrows to the top like the ridge of a house. In that state it may remain for ten days or a fortnight, during which time the heat should be examined towards the middle of the bed, by thrusting some small sharp sticks down in three or four places; and when found of a gentle heat, the bed may be spawned, for which purpose the spawn bricks should be broken regularly into pieces about an inch and a half or two inches square, beginning within six inches of the bottom of the bed, and in lines about eight inches apart; the same distance will also do for the pieces of spawn, which, in a dung ridge, are best put in by one hand, raising the dung up a few inches, whilst with the other the spawn can be laid in and covered at the same time. After spawning the bed, if it is found in that regular state of heat before mentioned, it may be earthed. After the surface is levelled with the back of a spade, there should be laid on two inches of mould—that out of the trench, if dry and good, will do; otherwise, if to be brought and a choice made, that of a kindly loam is to be preferred. After having been laid on, it is to be beaten closely together, and when the whole is finished, the bed must be covered about a foot thick with good oat-straw, over which should be laid mats, for the double purpose of keeping the bed dry and of securing the covering from being blown off. In the course of two or three days, the bed should be examined; and if it is considered that the heat is likely to increase, the covering must be diminished for a few days, which is better than taking it entirely off. In about a month or five weeks, mushrooms will most likely make their appearance, and in the course of forty-eight hours afterwards, they will have grown to a sufficient size for use. Mushrooms are sometimes grown in the same bed with melons and cucumbers. The spawn is inserted in the mould and on the hills of the beds, as soon as the burning heat is passed. In September or October, when the bines of the plants decay, the bed is carefully cleaned, the glasses put on and kept close, and when the earth becomes dry, water is frequently but moderately given, as well as every mild shower admitted when necessary. A gentle heat is thus caused, and the produce is often extraordinarily abundant, frequently two bushels, from a frame ten feet by six feet, and mushrooms have been produced two pounds in weight. Mushrooms may also be grown in a cellar or other vaulted place, neither fire nor water being necessary. In gathering mushrooms, the covering being carefully turned off, only such are to be taken as are half an inch or more in dia-

meter before they become flat, but are compact and firm. Each mushroom is detached by a gentle twist completely to the root; a knife must never be employed, for the stumps left in the ground decay, and become the nursery of maggots, which are liable to infect the succeeding crop.

MUSHROOM ESSENCE.—Select either flap or button mushrooms, and sprinkle salt over them; three hours afterwards wash them; next day strain off the liquor that will flow from them, put it into a stewpan, and boil it till it is reduced one-half. This essence will not keep long, and should be used, therefore, as soon after it is made as possible.

MUSHROOM FORCEMEAT.—Cut closely off the stems of some small, just-opened mushrooms, peel them, and take out the fur. Dissolve an ounce and a half of fresh butter in a saucepan, throw the mushrooms into it with a little cayenne and a slight sprinkling of mace, and stew them softly, keeping them well shaken for six or seven minutes, then turn them into a dish, spread them over it, and raise one end, that the liquid may drain from them. When they are quite cold, mince, and then mix them with four ounces of bread-crumbs finely grated, an ounce and a half of butter, and part of that in which they were stewed. Should the forcemeat appear too moist to admit of the whole, strew in a saltspoonful of salt, a third as much of cayenne, and about the same quantity of mace and nutmeg, with a teaspoonful of grated lemon-peel. Mix the whole thoroughly with the unbeaten yolk of one egg, and use the forcemeat poached in small balls for soup, or fried and served in the dish with roast fowls, or round minced veal; or to fill hoiled fowls, partridges, and turkeys.

☞ Mushrooms, peeled and trimmed, 4ozs.; butter, 1½oz.; mace and cayenne, slight sprinkling; bread-crumbs, 4ozs.; butter, 1½oz. (with part of that used in the stewing); salt, 1 saltspoonful; cayenne, mace, nutmeg, ¼ of saltspoonful each; lemon-rind grated, 1 teaspoonful; egg, 1 yolk.

MUSHROOM KETCHUP.—Take fresh-gathered mushrooms, with full large-grown flaps, put a layer of these at the bottom of a deep earthen pan, and sprinkle them with salt, then another layer of mushrooms, another sprinkling of salt, and so on alternately. Let them remain for two or three hours, by which time the salt will have penetrated the mushrooms, and rendered them easy to break. Pound them in a mortar, or mash them well with your hands, and let them remain for a couple of days, stirring them up and mashing them thoroughly each day. Then transfer them into a stone jar, and to each quart add an ounce and a half of whole black pepper, and half an ounce of allspice; stop the jar very close, and set it in a stewpan of boiling water, and keep it boiling for two hours. Take out the jar, and strain the contents through a hair sieve (without squeezing the mushrooms) into a clean stewpan, let it boil very gently for half an hour, then allow

it to become cool, and bottle it. Be particular in corking the bottles closely, and afterwards seal them. Keep them in a dry and cool place. Examine the ketchup from time to time, by placing a strong light behind the neck of the bottle, and if any pellicle appears about it, boil it up again with a few peppercorns.

MUSHROOM POWDER.—Wash half a peck of large mushrooms clean from all dirt and grit; and scrape out the fur; put them into a stewpan over the fire without water, with two large onions, half an ounce of cloves, a quarter of an ounce of mace, and a dessertspoonful of white pepper, all in powder; simmer and shake the whole till all the liquor be dried up, but be careful that the mushrooms do not burn. Lay them on tins or sieves, in a slow oven, till they are dry enough to be reduced to powder; do this in a mortar, then put the powder into small bottles, closely tied and corked, and keep them in a dry place.

☞ Mushrooms, ½ peck; onions, 2; cloves, ½oz.; mace, ¼oz.; pepper, 1 dessertspoonful.

MUSHROOM SAUCE.—Pick and peel half a pint of small mushrooms, wash them very clean, and put them into a saucepan with half a pint of veal gravy or milk, a little pepper and salt, and an ounce of butter rubbed with a tablespoonful of flour; stir them together, and set them over a gentle fire to stew slowly till tender; skim and strain it, then serve.

☞ Mushrooms (small), ½ pint; veal gravy or milk, ½ pint; pepper and salt, sufficient; butter, 1oz.; flour, 1 tablespoonful.

MUSHROOM TOAST.—Cut the stems from a quart of small, just-opened mushrooms, peel them, and take out the gills. Dissolve two ounces and a half of fresh butter in a stewpan, put in the mushrooms, strew over them a quarter of a teaspoonful of powdered mace mixed with a little cayenne, and let them stew over a gentle fire for twelve or fifteen minutes, stirring them frequently during the time; then add a dessertspoonful of flour, and shake the pan round until the contents are slightly browned. Pour in, by slow degrees, half a pint of gravy, or of good beef broth; and when the mushrooms have stewed gently in this for two minutes, throw in a little salt, add a squeeze of lemon-juice, and pour them on to a crust cut about an inch and a quarter thick, from the under part of a moderate-sized loaf, and fried in good butter to a light brown, after having been first slightly hollowed in the inside.

☞ Mushrooms, 1 quart; butter, 2½ozs.; mace mixed with cayenne, ¼ teaspoonful; flour, 1 dessertspoonful; gravy or broth, ½ pint; salt, lemon-juice, crust of bread.

MUSHROOMS BROILED.—Select the largest-sized mushrooms, make a gridiron hot over a clear fire, and rub the bars with suet to prevent the mushrooms sticking; place them on the gridiron with their stalks upwards; sprinkle them lightly with salt and freely with pepper; serve them on a hot dish with a little cold butter under and over them.

MUSHROOMS BUTTERED.—Take the stems of the mushrooms only, rub them with a little salt to clean them, and rinse them in salt water; after which, dry them with a cloth, and have ready about two ounces of fresh butter for every pint of stems; put the butter into a stewpan over a slow fire, and let it remain until it begins to brown; then throw in the stems, and keep the pan on the fire for a few minutes until they become tender, continuing to shake them all the time, to prevent them from burning, and the butter from becoming oiled; pile them in a small dish, and serve them in their own gravy.

MUSHROOMS DRIED.—Peel small, some freshly-gathered flaps of mushrooms, cut off the stems, and scrape out the whole of the fur, then arrange the mushrooms singly on tins or dishes, and dry them as gradually as possible in a moderately-heated oven; put them into tin canisters and store them in a dry place.

MUSHROOMS PICKLED.—Select for this purpose the smallest buttons of the wild meadow mushrooms, in preference to those which are artificially raised, and let them be as freshly gathered as possible. Cut the stems off quite close, and clean them with a hit of new flannel slightly moistened and dipped into fine salt; throw them as they are done into plenty of spring water, mixed with a tablespoonful of salt, but drain them from it quickly afterwards, and lay them into a soft cloth to dry. For each quart of the mushrooms thus prepared, take nearly a quart of white wine vinegar, and add to it a teaspoonful of salt, half an ounce of whole white pepper, an ounce of ginger, slightly bruised, the fourth of a saltspoonful of cayenne, tied in a piece of muslin, and two large blades of mace; to these may be added half a small nutmeg, shred. When the pickle boils, throw the mushrooms in, and boil them in it over a clear fire, moderately fast, for eight or ten minutes. As soon as they are tolerably tender, put them at once into small stone jars, or into warm wide-necked bottles, and divide the spice equally amongst them. As soon as they are perfectly cold, secure them from the air with large corks, or tie skins and paper over them. They should be stored in a dry place, and guarded from severe frost.

Mushroom buttons, 2 quarts; white wine vinegar, 2 quarts; salt, 1 tablespoonful; white peppercorns, 1 ounce; cayenne, $\frac{1}{4}$ of saltspoonful; whole ginger, 2 ounces; nutmeg, 1 (small).

MUSHROOMS POTTED.—Select small flaps or buttons, wipe them with great nicety as in the preceding receipt. Stew them till they are perfectly tender, in butter, in the proportion of two ounces to every pint of mushrooms; add spice and pepper; when they are done, turn them into a large dish, spread them over one end of it, and raise it, so that they may be well drained from the butter. As soon as they are quite cold, press them very closely into small potting-pans; pour lukewarm clarified butter thickly over them, and store them in a cool, dry place.

MUSHROOMS PRESERVED.—Wash large buttons, lay them on sieves with the stalks upwards; sprinkle salt over them, to extract the water. When they are drained, put them into a pot, and set them in a cool oven for an hour, then take them out carefully, and lay them by to cool and drain; boil the liquor which comes out of them with a blade or two of mace, until half is boiled away. Put the mushrooms into a clean dry jar, and when the liquor is cold cover the mushrooms in the jar with it, and pour boiling suet over it; tie the jar well down with bladder, and store it in a dry closet.

MUSHROOMS STEWED.—Select button mushrooms, cut off the ends of the stalks, pare them neatly, and put them into a basin of water with the juice of a lemon as they are done. When all are prepared, take them from the water with the hands, and put them into a stewpan with a little fresh butter, lemon-juice, white pepper, and salt. Cover the pan close, and let the contents stew gently for twenty minutes or half an hour; then thicken the butter with a dessertspoonful of flour, and add gradually sufficient cream. Season to taste, adding a little pounded mace or grated nutmeg. Let the whole stew gently until the mushrooms are tender; skim off every particle of butter from the surface, and serve.

MUSHROOMS, TO DISTINGUISH.—As there are poisonous kinds of mushrooms nearly resembling that which is edible, a minute description of the latter will not be without its use. The stem of the edible mushroom is short, solid, and white, marked a little below the cup with a prominent ring,



the remains of the curtain which covers the gills in their early stage. The cup is at first white, regularly convex, and a little turned in at the edge. As it advances in growth, the surface becomes brown, scaly, and flattened. The flesh is white, firm, and solid; the gills are loose, reaching to the stem on all sides, but not touching it. When young, these are of a pinky red, but change to a hind colour about the same time that the cup alters its form, and the upper surface also changes colour. The latter circumstances distinguish it in this stage from the dark-gilled toadstool. False mushrooms have a warty cap, or else fragments of membrane adhering to the upper surface, they are also heavy, and emerge

from a species of bag; they grow in tufts or clusters in woods, on the stumps of trees, &c., whereas the true mushrooms grow in pastures. False mushrooms have an asstringent, styptic, and disagreeable taste. When cut they turn blue; they are moist on the surface, and generally of a rose or orange colour. When there is still a doubt as to the nature of the mushroom gathered, sprinkle a little salt on the spongy parts or gills. If they turn yellow, they are poisonous; if black, they are wholesome. The annexed illustrations will serve to bring the forms of the true and the false mushroom more distinctly before the eye. No. 1 is the true mushroom; No. 2 the false mushroom.

MUSK.—An animal secretion of strong odour; it is generally used in perfumery in the form of a tincture, which is made simply by infusing the musk in spirits of wine, and at the end of nine days filtering the infusion. Musk of good quality retains its odour longer than any other perfume; and on that account it is employed as a mixture with other perfumes to render them more durable.

MUSLIN.—A material used in summer for wearing apparel, and also applied to domestic purposes. In washing muslins soap should not be used; it may be first washed in plain water, and then boiled in rice water.

MUSSEL.—A genus of molluscous animals inhabiting the sea. Although mussels commonly afford a supply of wholesome food, they sometimes, especially in spring, acquire very poisonous properties, by which persons are suddenly attacked with flatulence and a distension of the stomach, which presses upon the surrounding parts, and for a time impedes the progress of digestion. The most effectual remedy, where the symptoms are severe, is the use of the stomach-pump, to remove the exciting cause of the disease; when this cannot be applied, or the symptoms are not sufficiently aggravated for its application, an emetic should be taken; and in order to afford effectual relief, a liniment composed of a quart of warm water, two tablespoonfuls of salt, and half an ounce of camphorated spirits of wine should be used.

MUSSELS BOILED.—Having washed them clean, put them into a dry saucepan; when they are sufficiently opened by the heat, remove a portion of the shells and half of the natural liquor; then put them into a saucepan with a little butter and chopped parsley, and let them remain no longer over the fire than is necessary to heat them through; they may then be served, and should be eaten with vinegar or lemon-juice.

MUSSELS PICKLED.—Boil the mussels with a little salt; remove the shells and save the liquor; add about a third of vinegar to the liquor, and boil up with cayenne, white pepper, and a blade of mace; let this get cold, and then add the mussels.

MUSTARD AND CRESS.—This is used as a small salad, and from the bitter quality of the mustard, is a good stomachic. It is

sown early in the spring, in a sheltered border in rows, and will be ready for cutting in a very few days. It may also be grown upon flannel moistened with water, and placed by the fireside.

MUSTARD, CULTURE OF.—This plant succeeds best in a fine rich mouldy loam. In early spring and late in autumn the situation should be sheltered; and during the height of summer, shaded from the meridian sun. Sowing for salading may be performed throughout the year. From the beginning of November to the same period of March, in a gentle hot-bed or in the corner of a stove. From the close of February to the close of April, it may be sown in the open ground, on a warm, sheltered border; and from thence to the middle of September in a shady one. The earth which covers the seed should be very fine; and the seed cannot be sown too thickly. Water must be given in dry weather, as a due supply of moisture is the chief inducement to a quick vegetation. The sowings are to be performed once or twice in a fortnight, according to the demand. To obtain seed, sow thinly. When the seedlings have attained four leaves, thin them to eight or nine inches apart. If dry weather occurs at the time of flowering, water may be applied with great advantage to their roots. The plants flower in June and are fit for cutting when their pods are brown. They must be thoroughly dried before threshing and storing. There are two species of mustard in cultivation in the field, the white and the black. It is an exhausting crop, but profitable when the soil answers, and especially in breaking up rich loamy lands, as it comes off earlier, and allows time for preparing the soil for wheat. In breaking up very rich grass lands, three or four crops are sometimes taken in succession. It cannot, however, be considered as a good general crop for the farmer, as it yields little or no manure.

MUSTARD FOOTBATH.—Fill a footbath with water sufficiently warm to be agreeable, but not hotter. Stir in four ounces of mustard, keep the feet and legs in the bath for half an hour, adding warm water from time to time, so as to keep up the original temperature; then get into bed. This is an excellent remedy in recent or confirmed colds, and will afford great relief from rheumatic and other pains.

MUSTARD LOTION.—Mix two ounces of mustard with half a pint of spirits of wine, and two drachms of camphor; let this mixture stand for two or three days carefully corked in a bottle; then strain it off, and keep it closely bottled for use. This lotion is excellent for sprains, rheumatism, and other painful affections.

MUSTARD PLASTER.—This is one of the safest, and frequently the most efficacious remedy in the practice of domestic medicine. For all sudden and acute pains, especially of the chest and the abdomen, this remedy may, in nearly every instance, be resorted to without fear of any evil consequences; and even where it does not effect any permanent benefit, it never fails to afford

temporary ease and alleviation during the interval that the medical attendant is being sent for. In making the mustard plaster, good fresh mustard should be used, mixed with water, as for the table, and spread on calico or paper. The usual length of time a mustard plaster can be borne is from twenty minutes to half an hour. When the plaster is applied, a piece of thin gauze or muslin should be interposed between it and the skin; for by this precaution, the potency of the plaster is not diminished, and all irritation of the skin is avoided.

MUSTARD POULTICE.—This remedy is somewhat similar to the preceding. Cut a thick slice of bread from a loaf, put it into a basin, and pour boiling water over it; when it is thoroughly soaked, strain the water off, lay the bread upon the linen which is to receive it, and spread the ready-made mustard thickly upon it; apply it with gauze or muslin, and suffer it to remain as long as it can be borne.

MUSTARD, PROPERTIES AND USES OF.—When used in moderation as a stimulating condiment, mustard is wholesome; but taken to excess, it is highly irritating and injurious. As a *medical agent*, the chief use of mustard is as a counter-irritant in acute pains of the body or limbs, when its effect is often marked and beneficial; and, besides alleviating the pain, it has also the tendency of inducing sleep. As an internal remedy, mustard is a safe and effectual emetic, in doses of one, two, or three teaspoonfuls in a teacupful or tumbler of water. There is scarcely any article of domestic use that is more extensively adulterated than mustard, and its employment, both as a condiment and a medicinal agent, renders it important that this article should be bought of the most reliable dealer.

MUSTARD TARTAR.—Rub four ounces of the best mustard very smooth, with a teaspoonful of salt, and wet it by degrees with strong horseradish vinegar, a dessert-spoonful of chili vinegar, and one or two of tarragon vinegar where its flavour is not disliked. Boil a quarter of a pint of vinegar, and pour it boiling upon an ounce of scraped horseradish; leave these standing for two or three days, and then pour the vinegar on to the mixture previously mentioned. This makes an extremely pungent condiment, and as such is highly esteemed by many.

MUSTARD, TO MIX.—To eight teaspoonfuls of mustard, put one teaspoonful of salt, and nine of water; mix them well together, then add six spoonfuls more of water, and well mix the whole by rubbing it round the side of the cup, or other vessel, till it is free from lumps, and of a perfectly smooth consistency.

MUSTARD WHEY.—Boil four drachms of the bruised seeds of mustard in a pint of milk; then strain and separate the curd; a fourth part should be taken three times a day.

MUTTON, BREAST OF, COLLARED.—Remove the skin and bone from a breast of mutton, and tie the meat round with tape, roast it before a gentle fire, put a pint of milk and two ounces of butter into the

dripping-pan, and with this baste the meat while it is roasting. Serve with a rich sauce.

MUTTON, BREAST OF, GRILLED.—Parboil a breast of mutton; score it, pepper and salt it well, rub it with the yolk of egg dipped in bread crumbs and chopped parsley; dress it in a Dutch oven, and serve with caper sauce.

MUTTON BROTH.—Boil the scrag end of mutton in three or four quarts of water, skim the liquor as soon as it boils, and put in a carrot and turnip, a crust of bread, an onion, a small bunch of herbs; let these stew; then put in the other part of the neck that it may be boiled tender. When done sufficiently, take out the meat, strain the broth, put the meat in again, with a few onions and a little chopped parsley; boil these for a quarter of an hour, and serve the broth and mutton, either together, or in a tureen, or the meat in a separate dish; do not send up the scrag unless particularly liked. The broth may be thickened at pleasure with bread crumbs or oatmeal. *When the broth is required in a hurry*, it may be made as follows: Take a boue or two of a neck or loin of mutton, remove the fat and skin, heat the remainder, cut it into small pieces, set it over the fire in a small tin saucepan, with three-quarters of a pint of water, put in a little thyme, parsley, and onion. Cover the saucepan, and let the contents boil very quickly; skim it thoroughly, and in half an hour it will be done.

MUTTON CHOPS, BROILED.—The chops for this purpose should be cut from the loin from half an inch to three-quarters in thickness. Put the gridiron over a bright clear fire, and when it is warmed lay on the chop; turn the chop continually, but without sticking a fork into it; in eight or ten minutes the chop will be sufficiently cooked, the best sign being when the lean feels hard and the fat is transparent. Serve immediately in a hot plate.

MUTTON CHOPS, STEWED.—Trim the fat entirely from the chops, just dip them into cold water, dredge them moderately with pepper, and plentifully on both sides with flour; put four tablespoonfuls of cold water into a thick iron saucepan, place the chops at the bottom in one flat layer, if it can be conveniently done, and set them over a very gentle fire; throw in a little salt when they begin to stew, and let them simmer as gently as possible, but without ceasing, from an hour and a quarter to an hour and a half. Turn the chops when they are half done, and if they do not yield sufficient moisture, add two or three tablespoonfuls of water or gravy; carefully skim off all fat, and serve them in their own gravy.

MUTTON CUTLETS.—Let a leg of mutton hang as long as it will keep, cut slices from it the crossway, season them with pepper and salt, strew chopped shallots and parsley over them, flour them and put them into a stewpan with a little butter; set them over a brisk fire, and they will be dressed in a quarter of an hour or twenty minutes; put to them half a pint of stock

gravy, a little cayenne, some ketchup, more flour if the sauce be not thick enough; let it simmer a few minutes, then serve.

MUTTON, DIETETIC PROPERTIES OF.—This meat is very nutritious, and of easy digestion. When the stomach is very delicate, boiled mutton is the most suitable; but generally speaking, roast mutton is most nutritious, especially when cut out of the middle of a leg, moderately dressed. The hanging of mutton conduces to its tenderness, and in this condition it is rendered more easy of digestion. The south-down, and the Welsh mutton are the most highly esteemed kinds, on account of their tenderness and nutritive qualities.

MUTTON HAM.—Select a leg of mutton, weighing about seven pounds, hang it for two days. Take six ounces of coarse brown sugar, an ounce of saltpetre, four ounces of bay salt, and three ounces of common salt. Mix them well together, and rub the mixture well into the ham, lay it in a tub with the skin downwards, and rub in the mixture every day for a fortnight; then hang the meat in wood smoke for a week. It will be found excellent cut into rashers and broiled.

MUTTON HARICOT.—Cut the neck or the loin of mutton into chops, fry them, flour them, put them into a stewpan with three pints of stock gravy, a carrot and turnip sliced, an onion stuck with cloves, and a seasoning of pepper and salt; let the chops stew till quite tender, which will be in about three hours. Take out the chops, strain the sauce, put into it carrots and turnips, previously boiled and cut into squares; simmer these for a minute or two in the sauce, lay the chops on a dish, and pour the sauce over them.

MUTTON HASHED.—Take three pints of stock gravy, seasoned with a large onion cut into rings, and a little pepper and salt; let this boil until the onion is done; then add a little thickening, put in the meat, and let it simmer for ten minutes. Toast a round of bread, cut it into diamond shape, and place it round the dish; pour in the hash, and serve. *To hash mutton, venison fashion*, proceed as follows:—Boil three pints of stock gravy in a saucepan, then add a gill of port wine, a seasoning of cayenne pepper and salt, a little flour to thicken, and a small portion of butter. Cut the meat into slices, put it into the saucepan, and let it simmer for four or five minutes; make a light puff paste, roll it out, cut into diamond shape, and fry in boiling fat; dish the hash with the sippets placed round it, and serve with currant jelly.

MUTTON, HAUNCH OF.—Let the haunch hang as long as it will keep good; then cut off the shank and trim the flap or underpart; set the joint before a brisk fire, keeping it near the fire for the first ten minutes, and afterwards at a more moderate distance until it is done; before taking it up, dredge it with a little flour, and put it closer to the fire to froth it up, then dish; pour a pint of boiling water over the meat, to which add a little colouring and ketchup.

MUTTON, JOINTS OF.—The names of the various joints of mutton may be easily ascertained by the aid of the annexed illustration, and its accompanying letters, as follows:—A, the shank; B, the leg; C, the flap; D, the chump loin; these constitute collectively the haunch; E, the chop loin; F, the best end of the neck; G, the scrag; H, the breast; I, the shoulder; J, the head. Of these joints it may be observed, that the haunch is considered the most delicate; the leg the most profitable; the shoulder the coarsest; the breast most fit for stewing; and the neck and scrag for broth.

MUTTON, KEOBBED.—Cut a loin of mutton into steaks; remove the fat and skin, mix a small nutmeg grated with a little salt and pepper, bread crumbs, and herbs; dip the steaks into the yolks of eggs, and sprinkle the above mixture over them; then place the steaks together as they were before they were cut asunder, tie them, and fasten them on a small spit; roast them at a quick fire, set a dish under, and baste them with a piece of butter mixed with the gravy that comes from the meat. When sufficiently done, lay the meat on a dish with half a pint of good gravy, previously prepared, with two tablespoonfuls of ketchup, and a teaspoonful of flour.

MUTTON, LEG OF, BOILED.—Previously to boiling, soak the meat for two hours in cold water, then put it into the saucepan with just sufficient water to cover it, and let it boil gently, allowing a quarter of an hour to each pound of meat; and if the leg be a large one, a few minutes extra. When nearly ready, remove the saucepan to the side of the fire, keep it well covered, and let the meat remain in for ten or fifteen minutes. Serve with caper sauce.

MUTTON, LEG OF, BRAISED.—Select a very small leg of mutton, cut off the knuckle and trim it neatly; half roast the leg then put it in a stewpan with the trimmings, the knuckle-bone broken, a few slices of fat bacon, an onion stuck with cloves, and a bunch of sweet herbs. Shake



the stewpan over the fire until there is gravy enough from the meat to stew the mutton, and be careful to turn it in the braise; when very tender, take it up, skim the fat from the gravy, strain it, and boil it quickly, until it is reduced to a glaze, turn it over the meat, and serve.

MUTTON, LEG OF, ROASTED.—A leg of mutton intended for roasting should be kept longer than for boiling. Remove the thick skin very carefully, trim off the piece of flank which adheres to the fat, and flatten the fat with a chopper, cut off the knuckle, and nick the cramp-bone; put a little salt and water into the dripping-pan to baste the meat with at first, and afterwards use only its own gravy. It should be roasted slowly, and at some distance from the fire, being placed closer for the last twenty or thirty minutes to give it colour. After it is dished, sprinkle a little fine salt lightly over it, and pour two or three tablespoonfuls of boiling water over it. A part of a leg of mutton may be advantageously roasted for a small family as follows:—Cut the knuckle into a good-sized joint, and keep it for boiling; cover the other portion of the leg with a coarse paste, in order to keep in the gravy; roast it in the ordinary way. Or, if the skin be raised gently from the outside of the leg to about six or seven inches wide, two or three good slices may be cut off for steaks, and the skin fastened down over the remainder with skewers.

MUTTON, LEG OF, WITH OYSTERS.—Select some choice oysters, parboil them, and remove the beards and horny parts; add to them chopped parsley, minced onion, and sweet herbs, and the yolks of three hard-boiled eggs. Mix all together, and cut five or six holes in the fleshy part of a leg of mutton, and put in the mixture. It may then be either boiled or braised.

MUTTON, LOIN OF, ROASTED.—Pare off the superfluous fat from the meat, and set it by for melting down. When thus reduced in size, roast it in the usual way, taking care to preserve the fat from being burned, even in the slightest degree.

MUTTON, LOIN OF, VENISON FASHION.—Skin and bone a loin of mutton, and lay it into a stewpan or braising pan, with a pint of water, a large onion stuck with cloves, half a pint of port wine, and a tablespoonful of vinegar; when it boils, add a small bunch of thyme and parsley, and a seasoning of pepper and salt; let it stew for three hours, turning it frequently. Make some gravy of the bones, and add it at intervals to the mutton when required.

MUTTON, MINCED.—Mince cold leg of mutton very finely, free it from the skin and fat, and warm it up with sufficient gravy, a little ketchup, and a seasoning of pepper and salt.

MUTTON, NECK OF, TO DRESS.—This joint may be either boiled or roasted, in the ordinary manner; but the following method affords an excellent dish:—Boil the neck very gently, until it is nearly done; cover it with bread crumbs, minced

sweet herbs, and yolk of egg, and set it before the fire in a Dutch oven. When sufficiently done, serve.

MUTTON PIE.—Select either the loin, or the best end of the neck of mutton; if the former, take away the fat, and trim neatly; cut the meat into chops, season them with pepper and salt, and lay them in a pie-dish, with a little water, and two or three tablespoonfuls of ketchup; add chopped onion and potatoes (if approved); cover with paste, and bake it for two hours; when done, raise the crust with a knife, pour out all the gravy, let it stand, and skim it clean; add, if required, some more seasoning; boil it up, and pour it into the pie.

MUTTON PUDDING.—Cut slices from an underdone leg of mutton, with kidneys sufficient to form alternate layers, mixed with some minced onions. Then proceed in the same manner as for beefsteak pudding.

MUTTON, SADDLE OF, ROAST.—This joint is formed of the two loins. It should hang for two or three days before it is cooked, to render it tender. Cut out the kernel, and rub the part close round the tail with salt. Take out the fat and the kidneys from the inside. Roast it in a cradle-spit; when nearly done, sprinkle it with salt, dredge it with flour, and send it to table finely broiled. Another method of roasting this joint is as follows:—Remove the skin from the tail without taking it quite off, or breaking it; mince together some lean ham, green onions, parsley, thyme, and sweet herbs, seasoned with allspice, pepper, and salt; strew this mixture over the meat where the skin has been taken off; lay the skin over it neatly, and tie over all a sheet of buttered paper; roast the joint, and when it is nearly done, remove the paper, strew bread crumbs over the joint, and when the meat has become delicately browned, serve with rich gravy.

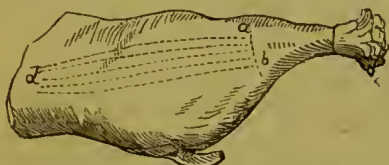
MUTTON SAUSAGES.—Take a pound of mutton, either undressed, or that which has been underdone; mince it very small, and season it with pepper, salt, and mace. Chop half a pound of beef suet, two anchovies, a dozen oysters, a quarter of a pound of grated bread, and a boiled onion: mix the whole with the oyster liquor, and two eggs well beaten; pound the whole in a mortar, fill the skins, and fry the sausages.

MUTTON, SHOULDER OF, BOILED.—Parboil a shoulder of mutton, put it into a stewpan, with two quarts of the liquor that it was boiled in, a quarter of a pound of rice, two tablespoonfuls of ketchup, with a little beaten mace; let it stew until the rice is tender, then take up the mutton, and keep it hot; add to the rice a pint of milk, and a piece of butter rolled in flour; stir it well, and let it boil for a few minutes; lay the mutton in the dish, pour the rice over it, and serve.

MUTTON, SHOULDER OF, ROAST.—Select a shoulder of mutton that is not too fat, roast it, allowing ten minutes to each pound of meat, and serve with onion sauce.

MUTTON STEWED.—Put into a broad stewpan or saucepan a flat layer of mutton chops, freed entirely from the fat, and from the greater portion of the bone; season with pepper, and dredge lightly with flour; on these put a layer of turnips, half an inch thick and cut into squares, then some carrots of the same thickness, with a seasoning of pepper and salt; next, another layer of mutton, then plenty of vegetables, and as much weak broth or cold water as will barely cover the whole; let them boil slowly, and then just simmer for two or three hours, according to quantity.

MUTTON, TO CARVE.—*The Haunch.*—This joint, which consists of the leg, is carved as follows:—Have the joint placed lengthwise before you, the knuckle being the furthest point. Cut from *a* to *b*, taking



care not to allow the gravy to escape; then cut from *a* to *d*. The knife should slope in making the first cut, and then the whole of the gravy will be received into the well.

The Leg.—This joint, whether roast or boiled, is dished as it lies in the engraving; slice the meat rather thick than thin, in the



direction of the line extending from *a* to *b*; the fat will be found in the direction *c d*. Those who like their meat well done should be served from the knuckle end; and those who prefer it not so well dressed, may be helped from the thicker portion of the leg.

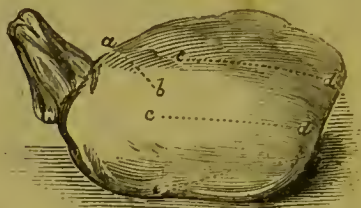
The Loin.—This joint is easily carved, as the bones are divided at the joints. Begin at the narrow end, and take off the chops; slices of meat may be obtained between the bones, when the joints are cut through.



The Saddle.—Cut from *A* to *B*, keep the

knife sloping, but do not let the slices be too thick. This is the prime cut. If it be required leau, cut from *c* to *d*; if fat, from *d* to *e*. The fillet, which some prefer, is to be found underneath.

The Shoulder.—Commence by cutting from the outer edge, direct to the bone in the line *a b*, and carve as many slices from that part as the joint will afford; then, if more be required, draw the knife on either side of



the ridge of the bladebone, in the direction *c c d d*. The fat must be carved in the line *e f*. Some eaters have a preference for the juicy, but rather coarsely grained, flesh on the under side of the shoulder, which must be turned for it to be carved.

MUTTON, TO CHOOSE.—Mutton is considered in its prime at five years old; but as this is rather difficult to find, the nearer it approaches that age the primer it will be. Young mutton will, if squeezed with the fingers, feel tender; if old, it will remain wrinkled; the fat will also be clammy and fibrous. In ram mutton the grain is close, of a deep red colour, and the fat spongy; in ewe mutton, the flesh is paler than in the wether, and has a closer grain. Short-shanked mutton is considered the best.

MYRRH.—A gum resin brought from the Levant and the East Indies, and used in medicines. A gargle is made as follows: add six drachms of tincture of myrrh to seven ounces of infusion of linseed, and then



add two drachms of diluted sulphuric acid. The myrrh tree grows in Arabia and Abyssinia. There is also a British myrrh, a hardy herbaceous plant, which may be propagated by seeds, dividing at the root, and slips inserted in early spring in a shady place, and planted in common garden soil.

MYRTLE.—There are several varieties of the common myrtle—as, the broad-leaved, box-leaved, Italian, Portugal, orange-leaved,



rosemary-leaved. It is easy of culture in the greenhouse, or even in common apartments, and is readily propagated by slips. In warm sheltered borders it will also thrive in the open air, but requires protection in severe winters.

N.

NAILS, IN IRONMONGERY.—Every housekeeper should keep a constant supply of nails of various sizes, as they are frequently required for repairs, and other odd jobs; and by the timely driving in of a nail, further damage is arrested. In gardening, nails play an important part; those for training trees are best made of cast iron, being the cheapest, stoniest, and most enduring. Before using them, they should be heated almost to redness, and then thrown into cold linseed oil. When dry, they will acquire a varnish, which will preserve them from rust, and will also prevent the mortar of the wall sticking to them so corrosively as it does when the nails are not oiled. In drawing old nails from walls, they should be first driven in a little further, as by this means the mortar will not be so much disturbed in extracting them. Old nails may be renovated by being heated to redness, and then thrown into water: this removes the mortar from them; then they may again be heated, and put into oil, as before mentioned. The cast iron nails used by gardeners are known to the ironmongers as wall nails, and are described as 2 $\frac{1}{2}$, 3, 4, and 5lb. nails, accordingly as 1000 of them are of those weights. Nails in most cases

require to be driven only a very little way into the mortar, and walls will be thus preserved for many years. In all summer nailing of peach trees, roses, &c., the point only requires to be driven in, so that the nail may be easily withdrawn by the fingers. Crooked nails may be straightened, by placing them on a stone with the bent part uppermost, and beating them flat by gentle blows with a hammer.


NAILS, OF THE HANDS AND FEET.—The state in which *the nails of the hand* are kept, affords an unerring indication of delicacy and cleanliness, or the contrary. Whenever the hands are washed, the nail brush should be used, until the nails become perfectly clean. In wiping the hands, the flesh growing at the bottom part of the nail should be pushed back with a corner of the towel, so that its growth may not encroach upon the nail. The nails should be kept properly trimmed and cut, and this will not occupy many minutes in the course of the week. The proper way of cutting them is to clip the sides, and bring the top part to a rounded point. A person should be cautious, however, not to cut too close to the quick, and never to cut the scarf skin, or nail springs will be produced. Filing the nails is also a pernicious practice, and quite unnecessary, as a pair of nail scissors and a penknife can perform all that is required. When nail springs are detected, they should not be torn forcibly out, as a whitlow may thus be caused; the finger should frequently be soaked in hot water, and the nail spring gradually removed as it becomes loosened. The white spots seen on the nails are caused by blows and other injuries. There is no remedy for these defects, but as the nail grows they will disappear. The habit of biting the nails is one of the most offensive that can be imagined, and the effects produced very repulsive to the sight. When this is a trick of youth, the offender should be persistently punished until the bad habit is eradicated. With grown-up persons, a moment's consideration ought to be sufficient to produce a cure. The whiteness of the nails is considered a beauty. This is effected by brushing the nails with lemon-juice after they have been cleaned; then washing them with clean cold water, and finally wiping them dry. Where, however, the nails have been greatly neglected, the following remedy will render them white. Take of diluted sulphuric acid two drachms; tincture of myrrh, one drachm; spring water, four ounces; mix these well together. Cleanse the nails with white soap and water, then dip them in the wash, and afterwards wipe them dry. *The nails of the feet* require attention from time to time; they should be cut once a week at least. A most painful complaint in connection with the toe nail is where it grows into the flesh. When indications of this deformity present themselves, the nail should at once be attended to, and further growth arrested, by frequent soakings in warm water, and gentle applications of the scissors and knife. When, however, the growth increases, recourse should be had to surgical aid.

NANKEEN, To WASH.—Put a large handful of salt into a vessel, with a gallon of cold water; immerse the nankeen, and let it remain for twenty-four hours; then wash it in hot lye without soap, and hang it up to dry without wringing it. Nankeen washed in this manner, will keep its colour for a long time.

NAPHTHA.—A spirituous and oleaginous substance. Coal naphtha, produced from coal tar by distillation, together with a spirit obtained from the distillation of dry wood, is sold as a burning fluid for lamps. The light is very brilliant but of a most unpleasant smell, and gives out an intense quantity of smoke. In order to burn naphtha, the wick of the lamp must be exposed to a free and strong current of air. In trimming the lamp, it should never be filled, but have sufficient space for the spirit to expand as it becomes warm.

NAPKIN, TABLE.—The napkins used at dinner and other repasts are not only useful, but serve to decorate a table. They are usually made of diaper, and where economy is studied, old tablecloths may be cut up for this purpose: they should be about twenty-eight inches broad, and thirty inches long. When napkins are placed on the table, they should be folded neatly and with taste. A variety of forms may be adopted; the French method, which is very easy, of folding the napkin like a fan, placing it in a glass, and spreading out the upper part, is picturesque. But the English method of folding the napkin in the form of a slipper and placing the bread inside, has the merit of being convenient as well as neat. For keeping the napkins in proper form, a napkin press will be found very convenient.

NAPLES CAKES.—Take seven ounces of blanched almonds sweet, and one ounce of bitter; pound them to a paste with a few drops of orange-flower water; then mix them thoroughly with a pound of flour and half a pound of butter; break this down quite small, then add half a pound of powdered sugar, on part of which the rind of a lemon has been rasped previously to its being crushed to powder. Make these into a paste with the yolks of four eggs. Roll the paste less than a quarter of an inch thick, and cut it into six or seven portions of equal size; lay these on lightly floured or buttered tins and bake them in a slow oven, until they are firm and crisp, and equally coloured of a pale brown. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be decorated in any manner that the fancy suggests.

 Almonds sweet, 7ozs.; almonds bitter, 1oz.; flour, 1lb.; butter, 1lb.; sugar, 1lb.; lemon, 1 rind; eggs, 4 yolks; orange-flower water, sufficient; preserves, as needed.

NAPLES CHEESE.—Put ten pints of new milk into an iron pot, furnished with a cover, and capable of holding ten times the quantity. Use sufficient pressure to curdle it, and when curdled, place it over a quick fire, stirring it rapidly with a stick to prevent its burning, as also to separate the caseous

matter from the dregs. The heat must be tried by the finger, and when it becomes too hot to be borne, take off the pot, plunge both hands gently in and take the cheese out, which is easily raised at once, and in a single piece. Place it in a pan having a raised edge, so that in drying, the paste may not be too thin; press the whey carefully off, and some time afterwards, press it and turn it again; on the following day, salt it moderately, and put it in a place having a cool, dry, and even temperature. As soon as the cheese is cool it is fit to eat, but is best when four or five months old.

NAPLES SOAP.—Put into a pipkin or a saucepan, half a pint of lye, strong enough to float an egg; add two ounces of lamb suet, and an ounce of olive oil; simmer them over a fire until they are of a thick consistence; then pour the mixture into a flat pan, cover it with glass, and expose it to the heat of the sun for six or seven weeks, stirring it once a day: the soap will then be formed, and may be perfumed with a few drops of oil of ambergris. Put the soap into small jars, and it will improve by keeping.

NARCISSUS.—The varieties of this plant are the common double, or jonquil, the two-coloured daffodil, the white and the polyanthus. The tests of fine plants of narcissus are: strong neat stems, regularity of form and disposition in the petals and nectaries, distinctness and clearness of colours, and in many flowered sorts, the peduncles all of



the same length, and coming into flower at once. The propagation of this plant is by seed, for obtaining new varieties, but most commonly by offsets from the bulbs. As these offsets seldom flower the first year, they should be planted in a bed by themselves, composed of light, loamy soil; and they should be put into the ground not later than the end of August or the beginning of September. The seeds collected from the choicest plants should be sown in flat pans, filled with fresh, light, sandy earth, about the beginning of August, or soon after the ripening of the seed. These pans should be in a shaded place, and only exposed to the

morning sun till October; after that time they may be exposed to the full sun, but protected from heavy rains and frosts until April. In June the leaves will have decayed, when some fresh earth is to be sifted over the surface of the pans. During the second winter the same treatment is to be pursued, and in the following summer, the roots are to be taken up and planted at three inches asunder, in raised, convex beds; in two years from this time, they are again to be moved and replanted at double the distance in mould with a little cow dung. In the fifth year after sowing, most of the bulbs will come into flower, and the remainder next year. The flowers frequently improve in beauty in the second and third years, so that no bulb should be finally discarded until it has had this trial. Those bulbs with a round base and full sound tops are the best. The most suitable soil is a fresh, light loam, with a little cow dung, and dug to the depth of three feet. An eastern aspect is to be preferred. Stirring the soil occasionally, and weeding and watering are all the requisites in their culture. In the winter the beds require the protection of tan or litter. The bulbs should not be taken up oftener than every third year; for if they are allowed to remain longer, the plant is weakened by the numerous offsets. These bulbs may be forced during winter in pots, or in water glasses, where they become beautiful and sweet-scented ornaments for apartments.

NARCOFICS—Medicinal agents which diminish nervous excitement, alleviate pain, and procure sleep.—See CAMPHOR, HOPS, LAUDANUM, LETTUCE, OPIUM, &c.

NARD, or SPIKENARD, a highly aromatic plant growing in the East Indies, the *nardostachys jatamansi* of Decandolle, and of the natural order *valerianaceæ*. The fruit



has a strong smell and an acrid taste. It has been celebrated from the remotest antiquity on account of the valuable perfume extracted from its roots. In the East it is

largely used to scent oils and unguents, and also as a remedy in hysteria and epilepsy.

NASTURTIUM.—This plant is a native of Parma, where it is a hardy perennial. In this country, though it thrives well in the open air, it only lasts for one season, being unable to endure the cold in winter. The plant does not thrive in too rich a soil;



it may be sown in any situation, placing it near a wall or a tree, to which it may be attached, as it grows to the height of six or eight feet, and needs support. The seeds are employed as a pickle, and are used as a substitute for capers. The flower and under leaves are also eaten as salads.

NASTURTIUM PICKLE.—Select the seeds which are quite ripe and after the buds and flowers have gone off. Gather them upon a dry day, and let them lie spread about for a few days after they have been gathered; then put them into a jar, and pour boiling vinegar well spiced upon them; when cold, cover the jar. They will not be fit for use for six months.

NASTURTIUM VINEGAR.—Pick full-blown nasturtium flowers; fill a wide-mouthed bottle with them; add half a clove of garlic and a moderate-sized shallot chopped; pour in as much vinegar as the bottle will take; in two months' time rub the whole through a fine sieve; add a little cayenne pepper and salt; and keep closely corked for use.


NATURAL HISTORY.—Books: *Mrs. Lee's Familiar*, 3s. 6d.; *Natural History for Children*, 2s. 6d.; *Jesse's Gleanings in*, 6s.; *Home Book of*, 1s.; *Introduction to*, 2s. 6d.; *Lexicon of Terms*, 2s. 6d.; *Notes on*, 2s. 6d.; *Birds and Beasts*, 4s.; *Creation*, 1s.; *The Scripture Natural History*, 2s. 6d.; *Young's two parts*, 1s.; *Natural History of Selbourne*, 5s.; *Review of*, 1s. 6d.; *Romance of*, 3s. 6d.; *Study of*, 3s. 6d.; *Synopsis of*, 7s.; *Tales in*, 1s. 6d.; *Tyler's Handbook*, 1s.;

Naturalist's Album, 2s. 6d.; *Christian*, 3s.; *New Entertaining*, 3s.; *Barlow's Field*, 3s.; *The Juvenile*, 6s. 6d.; *Leaves from the Note Book of a Naturalist*, 10s. 6d.; *Young's Book of Birds*, 3s. 6d.; *Young's Journal*, 4s.; *Maunder's*, 10s. 6d.; *Reason Why, Natural History*, 2s. 6d.

NATURALIZATION.—In England, the granting to an alien the same privileges (with certain exceptions), as if he had been a British born subject.—See **ALIEN**, **DENIZATION**.

NAUSEA is that unsettled state of the stomach which precedes sickness or vomiting. It may exist without sickness, but sickness is always preceded by nausea, except in some states of childhood, where, after eating a hearty meal, instantaneous vomiting sometimes occurs. Nausea—as it prostrates the powers, causes relaxation of the nervous and muscular fibre, and is a condition of the system favourable to the absorption of any particular substance—is a state the physician is often most anxious to produce, that one or the other, or all of these advantages, may be obtained. Thus, on reducing dislocations in strong muscular men, to enable the operator to overcome the contractile power of the antagonistic muscles. In the reduction of hernia, for the same cause, in part. In fevers, to check the action of the heart, and throw the system into a relaxation favourable for the speedy absorption of the medicines to be given; and in many other diseases the artificial nausea produced by small doses of tartar emetic or ipecacuanha, is of the highest importance. Nausea is, however, very often a most distressing symptom, and when not terminated by vomiting, very likely to produce considerable prostration, and sometimes serious exhaustion. It therefore becomes of the first consequence to check this painful disposition as soon as possible. To effect this desirable object, an emetic is often not only necessary, but the best remedy that can be given, as it not only removes the probable cause, but excites a healthier action in the coats of the stomach. The horizontal position on the back, or side, and a little dried carbonate of soda with ginger, taken in a wineglass of water, or a teaspoonful of Gregory's powder in the same manner, will often be found to afford relief, and especially so if followed up by one or two aperient pills. When these means, however, fail, and the nausea continues unabated, a small mustard plaster laid on the pit of the stomach, or a blister, the size of half-a-crown, applied to the same part will, almost in all cases, correct this most distressing sensation.

NAVARA CAKES.—Rub two pounds of butter into three pounds of flour, add a pound and a half of sugar, and mix the whole thoroughly together with eight eggs well beaten; divide the paste into small portions rather larger than walnuts, and bake on floured tins.

 Butter, 2lbs.; flour, 3lbs.; sugar, 1½lb.; eggs, 8.

NAVIGATION.—Books: *Dibs's Laws*, 1s. 6d.; *Ricardos's Laws*, 7s. 6d.; *Epitome of Navigation*, 16s.; *Navigation Considered*, 8s. 6d.;

Lindsey's Treatise, 7s.; *Norie's Practical*, 16s.; *Jeans's Rules and Examples*, 2s.

NECK, AFFECTIONS OF.—The ailments usually found in this part of the body are either inflammation or simple enlargement of the glands, generally the sympathetic consequence of cold; or suppuration, the result of a scrofulous habit of body; or again, of enlargement of the whole or part of the salivary gland, as in mumps, or of the thyroid gland, as in goitre, wen, or bronchocoele, as the Derbyshire neck is differently called; or finally, a kind of rheumatic inflammation attacking the muscles and tendons of the part, by which the head is drawn aside, and an affection called “wry-neck” is produced. Cold, frequent sneezing, or the sympathy excited along the neck by disease in one gland, will often produce a series of enlargements through the same chain of organs; in this case, should the swellings not subside with the cure of the first cause, all that will be necessary is the application of a warm poultice for a short time, and then gently rubbing the glands with sweet oil, lard, camphorated oil, or opodeldoo, care being taken not to rub too hard, or persevere too long; such a means once or twice adopted will, in most cases, effect a remedy. The most severe affection of the neck, however, is the scrofulous enlargement of the glands, either below the lower jaw, in front of the neck, or some of the smaller glands that run from the ear to the shoulder. This condition is always known—for it may exist without any constitutional or other symptoms—by the indolence of the disease, and the time the glands remain enlarged before coming to maturity or suppuration. These tumours, occasionally only one, at other times two or three, exist at once, will continue soft, moveable, and free from all pain or discoloration for many weeks, perhaps months, till an accidental blow, or some extra excitement, causes them to become firm, hard, immoveable, and in time discoloured over their most protruding part, the skin becoming gradually purple; they now proceed slowly towards suppuration, and usually burst by two or three small openings, discharging a thin ichorous exudation, which continues for some time, till most of the tissue involved in the suppuration has been expelled, when the apertures heal with a puckered scar. Generally the subsidence of one suppuration is the beginning of another, and in this manner for years a succession of tumours are continued till, all the glands having been affected in turn, the disease stops, perhaps, to commence on the opposite side.

The treatment of this disease will be found, with an ample description of its symptoms, under the head of **SCROFULA**. With regard to the tumours themselves, they should, when once a person is assured of their nature, be continuously poulticed for some hours; and while internal remedies are given to affect the system, such an ointment as the following should be rubbed into the glands twice a day to endeavour to excite absorption. When, however, this desirable end cannot

be effected, the poultices must be resumed, suppuration encouraged, and as soon as the tumour points, the abscess should be opened, by making a small straight incision with a lancet, poulticing the part for a few days, and then stimulating it to heal by a weak lotion of sulphate of copper or blue stone.

Ointment. Take of

Powdered camphor	20 grains.
Hydriodate of potass	30 grains.
Iodine	3 grains.
Mercurial ointment	2 drachms.
Simple ointment	6 drachms.

Mix. A small quantity to be rubbed on the tumour night and morning. The wry neck, as has already been observed, is the consequence of a spasmodic contraction of the most superficial muscle of the neck, and when severe produces frightful distortion, by pulling the head and mouth out of their natural position. It has hitherto only been cured by dividing the fibres of the contracted muscle.—**Sec GOITRE, MUMPS, &c.**

NECKLACE.—An ornament worn by females round the neck. It is made of various materials, diamonds, pearls, coral, &c. In so conspicuous an ornament, its effectiveness greatly depends upon contrast in colour; it will thus be found that pearls will harmonize best with a dark complexion, and coral with a fair one. Persons who have long thin necks do not look well in necklaces, and they should, therefore, not be worn. *Necklets* have recently come into vogue, made of gold, and with a locket or some other ornament attached, and these are so constructed as to be worn round the wrist as a bracelet as well as a necklet. In purchasing necklaces, it ought to be observed that the clasp fastens securely, defects of this kind frequently existing, and as by the motion of the body in dancing or walking, the necklace is very much shaken, it is apt to be lost, unless securely fastened. The wearing paste for diamonds, mosaic gold for genuine gold, and other substitutions, is a hazardous experiment in the necklace, for as they are very conspicuous, and are worn at times when persons may leisurely scrutinize them, the detection of the social fraud is almost certain.

NECK TIE.—An article of male attire recently introduced in lieu of the more cumbersome cravat and stock. They are very simply adjusted, and may be purchased ready made up with a fastening behind which obviates the necessity of tying and untying. In the selection of neck ties all showy patterns and glaring colours should be discarded; the neater the design, the more gentlemanly will it appear; and a transgression of this rule is a sure sign of vulgarity, and want of taste. With some persons the front part of the tie has a tendency to slip round to the side, this may be avoided by fastening the tie to the collar of the shirt with a small black pin, at the back of the neck, beneath the waistcoat, where it is not seen.

NECTAR.—A beverage made as follows:—Take half a pound of raisins, and chop them small, add a pound of powdered sugar,

two lemons sliced, and the peel of one. Put these ingredients into an earthen vessel with two gallons of boiling water, which has been boiled for half an hour. Let the whole stand for three or four days, stirring it twice a day; then strain it, and in a fortnight it will be ready for use.

Raisins, 1lb.; sugar, 1lb.; lemons, 2, peel of 1; water, 2 gallons.

NECTARINE.—See PEACH.

NEEDLE, FOR BAITING, is an instrument used by anglers, it is made of brass or iron, about six to ten inches long, with a spring eye at one end and pointed at the

other; its use is to pass through the body, or just beneath the skin of a fish bait, and by attaching the hook, length of gut, or gimp, to the eye of the needle, and drawing tight, the hooks are brought into their desired position.

NEEDLE, FOR SEWING.—These are made of various qualities and prices. It is always cheaper to buy the best, and is a saving of time as well as expense. In purchasing needles, regard should be had to the eyes, which should be perfectly drilled, and to the points, which should be fined off, so as to pierce the material without difficulty. Needles should always be kept in a needle-case, which prevents them rusting, and keeps them from being lost. Much time is wasted by sempstresses throwing down their needle when they are interrupted in their work, and making long search for it on their return. On every such occasion, there should be a systematic plan of sicking the needle in a certain place, and in a conspicuous position, so that it may be recovered on the instant. The threading of a needle is facilitated by holding the eye of it before some object of a white colour. Short needles make more expedition in plain work than long ones.

NEEDLEWORK.—Books: *Miss Lambert's Art of*, 9s. 6d.; *Decorative Needlework*, 1s. 6d.; *Needlework Instructor*, 1s. 6d.; *Handbook of Needlework*, 6s. 6d.; *Mrs. Owen's Illuminator*, 9s.; *Mee's Manual*, 4s. 6d.; *Ornamental Needlework*, 4s.; *Plain Needlework*, 8d.; *Mrs. Warren's Treasures*, 7s. 6d.; *Art of Needlework*, 7s. 6d.

NEGUS.—When this is made for any number, take a bottle of wine, half a pound of powdered loaf sugar, and a lemon sliced; pour three pints of boiling water upon this mixture, and grate in nutmeg to taste. Sometimes persons prefer to mix the negus for themselves; in such cases it is better to use only half the quantity of water, poured boiling hot upon the wine already sweetened and flavoured; adding also a large and very thinly-pared rind of Seville orange, gives it a very superior flavour, without any portion of the acid.

NEROLI.—The essential oil of the orange flower. Three qualities are drawn off in distillation; the best quality is of a pale amber colour, and has a delicate fragrance; the inferior qualities are darker, and have an empyreumatic smell. Only the finest quality

should be used in perfumes. Neroli is not unfrequently used medicinally, for the correction of flatulence, in doses of from two to four drops taken in water.

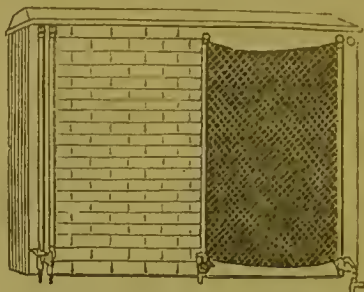
NERVES, AFFECTIONS OF.—By this term is more properly to be understood that peculiar state of physical irritability, the consequence of a languid or debilitated constitution, when the system is thrown into a state of extreme agitation and alarm by any abrupt sounds, exciting intelligence, and, as is sometimes the case, even from changes in the atmosphere. This was at one time supposed to be an affected disease, a fashionable ailment, the consequence of *ennui* and idleness; but there can be no doubt that persons are occasionally met with who are so peculiarly constituted, and whose organization is altogether so singular and irritable, that without any positive affection, a state of excessive nervous susceptibility, amounting to a disease, does in reality exist. In this sense alone is to be understood a term that is very much abused; persons in their ignorance attributing to the nerves vices, faults, and diseases with which this much maligned system of our sensation has nothing whatever to do. With the exception of that highly sensitive state of mind and body to which we have alluded, and which requires change of air, tonics, chalybeate waters, and a system of moral calisthenics for its cure, all other forms of really nervous affections must be looked for under neuralgia, or some special disease of a nerve, or part of a nerve.

NET.—A device for catching fish or birds. Although the making of the net is not very difficult, still it is scarcely worth the time and money expended, when a similar implement may be bought ready-made for almost the same money as the materials alone cost. In choosing a net, examine it closely, to see if the knots are properly fastened, the meshes regular, and the whole form level and even. Any defect in these particulars frequently renders the net useless.—See **BIRD-CATCHING**, **FISHING-NET**, &c.

NETTING.—Books: *Mee's Manual*, 5s. 6d.; *Miss Watts's Selections*, 1s.; *Ladies' Book*, 2s. 6d.; *Handbook*, 1s.; *Gauguin's Ladies' Assistant*, 16s.; *Every's Art of*, 2s.

NETTING SCREEN.—A contrivance made use of in horticulture to protect wall-fruit. It consists of two deal poles, on which is nailed a common fishing-net previously dipped in a tanner's bark-pit, to prevent its being mildewed when rolled up wet. At the top, the ends of the pole fit into double iron loops, projecting a few inches from the wall immediately under the coping; and at the bottom they are fixed, by a hole at the end of each pole, upon a forked iron coupling, which projects about fourteen inches from the wall, thereby giving the screen a sufficient inclination to clear the branches. When it is wished to uncover the trees, one of the poles is disengaged and rolled back to the side of the other, where it is fastened as before. The most violent winds have no injurious effect upon coverings of this kind; a wall is very

expeditiously covered and uncovered; and there is no danger of damaging the blossoms on using them; they occupy very little space when rolled up; are not liable to be



out of order, and will last for a long time. From the facility with which this screen is put up, it may be beneficially used in the season when fruit ripens, to secure a succession, by retarding the crop of any particular tree. The lower ends of the poles are advantageously maintained in their places, by means of a small iron spring-key attached to the coupling by a small chain. Canvas, oil-cloth, or gauze screens, may be similarly formed and fixed.

NETTLE.—A plant growing wild in the hedges and fields in England. It is believed that this plant is capable of exercising a beneficial influence on the blood, when gathered at the proper age and boiled. In March and April they are young and tender, and should be cut before they show any flowers, as after this they are strong in flavour and stringy in texture.

NETTLE BEER.—Boil two quarts of the sprouts of nettles in a gallon of water; strain the liquor, and add half a pound of sugar with a teaspoonful of ginger; when nearly cold, ferment with yeast, and bottle it securely while in a state of effervescence. It will be ready for use in a few days.

Nettle sprouts, 2 quarts; water, 1 gallon; sugar, 1lb.; ginger, 1 teaspoonful.

NETTLE STING.—The pain and smarting caused by the sting of a nettle may be cured by rubbing the part with the leaves of rosemary, mint, or sage.

NEURALGIA.—A disease of the nerves, so called from a pain in the nerve. It is a form of nervous affection, that may either arise of itself, or be the result of some other constitutional disturbance. Neuralgia may either attack the root of the nerve, or where it rises from the brain, or spinal marrow, attend its whole course, or only manifest itself in its branches, or even at the final termination of its smallest filament. According to the part affected, the disease has obtained different names. When the course of the nerve is affected, as in the hip or leg, it is called sciatica, when the extremity is affected, if in the teeth, it is called tooth-ache, and when the twigs and branches of the face are involved, tic-douloureux. The pain attending all neuralgic affections, is of the most acute and agonising description, being sharp,

sudden, and plunging; coming on in a moment, and after a paroxysm of intense suffering, abating as abruptly as it commenced; and so erratic and uncertain are its attacks, that it will sometimes be induced by the most trivial motion, action, or lightest contact, while, not unfrequently, a blow or hard pressure has no effect on the part. The twitching, or tic, that attends neuralgia so frequently, is always more marked where there are many small muscles in the neighbourhood, an aching numbness being left in the part for some time after the subsidence of the more acute pain. Neuralgia, as well as attacking the root, course, and extremities of a nerve, occasionally shows itself in the organ to which the nerve ultimately distributes itself, as in the heart, in *angina pectoris*, the breasts of females, and other organs. Though the subject of neuralgia has been deeply investigated, no satisfactory hypothesis has yet been come to, to account for the origin of the disease; and whether it depends upon a morbid state of the nerve, inflammation of the neurilemma, or sheath of the nerve, from pressure or some unhealthy condition of the nervous centres, is still an undecided question. The treatment of this most agonising disease must depend, as far as it can be ascertained, upon the supposed cause. When it is symptomatic, the treatment is much easier and more simple, and must be regulated by that cause, the first endeavour being to remove the primary disease, and after brace the system by chalybeate, tonics, wine, bark, and exercise. When idiopathic, however, the most opposite treatments have occasionally been successful, and sometimes all modes of cure have failed; and when physician and patient have both been exhausted with fruitless efforts, the malady has subsided of itself. As a general rule, however, the constitutional tonic and anodyne system, with counter-irritation, has been found the most successful practice; the three modes enjoined very frequently effecting what neither the tonic, the sedative, or the local irritation alone could achieve.

The safest mode of procedure in facial neuralgia, is to take an aperient pill, and the best for this purpose is the compound assafoetida, to be followed every four hours by a pill containing two grains of quinine for twenty-four hours; and during the second day, twenty grains of carbonate of iron in a little water, at the same periods, for the same time. Should the pain be unabated on the third day, either a couple of leeches are to be applied as near the seat of pain as possible, or a mustard and flour poultice, kept on for half an hour, with a glass of wine every four hours, and twenty to thirty drops of laudanum at bed-time, in conjunction with one or two assafoetida pills. Should these remedies fail of effect, the conjoined systems may then be adopted, and the following mixture and powders given as directed. Take of

Carbonate of ammonia . . .	25 grains,
Dover's powder . . .	40 grains,
Camphor water . . .	6 ounces,
Spirits of ether . . .	1 drachm.

Mix. Two tablespoonfuls every four hours. Take of

Carbonate of iron . . .	2 drachms
Quinine . . .	12 grains,
Dry carbonate of soda . . .	20 grains.

Mix, and divide into six powders, one to be taken in jelly or water an hour after each dose of the mixture. At the same time, apply a small blister behind the ear of the part affected. In some constitutions, it is necessary to resort to extreme doses, both of sedatives and stimulants, before any mitigation of the tormenting pain can be effected; and then it is necessary to give opium, rather in regard to the effect desired than with any reference to its conventional dose, and administer wine out of goblets, rather than in glasses. Such cases are unfortunately by no means rare, but they are such that no suffering should induce a patient to adopt on his own responsibility, and unsanctioned by a medical man.

Electricity and galvanism have been so often employed for empirical purposes, and many, only partially informed of its real efficacy, are prejudiced against its use as a health-restoring agent; it has therefore been thought advisable to give the medical routine of cure before pointing out a safe, easy, and very admirable remedial agent in the electro-galvanic chain, a small portable battery, that can be worn on any part of the body, and which, by keeping up a constant galvanic wave through the affected nerve, acts as a sedative, by equalising the nervous current, and often affording relief where all other means have failed to effect a moment's cessation of pain. The electro-galvanic chains, manufactured and invented by Pulvermacher, may be applied in any stage or in any kind of neuralgic pain, always with safety and relief, and in many cases with permanent cure. See PARALYSIS, and *Dictionary of Useful Knowledge*, article MEDICAL GALVANISM.

NEWFOUNDLAND DOG.—This animal is one of the most noble of the canine species. He is remarkable for faithful attachment to his master; for great strength, sagacity, and perseverance; for good temper, patience, and quiet fondness to all who belong to the household, as well as for being a fear-



less protector of whatever is consigned to his charge. In the water he is of as much service as on land, he is no contemptible assistant to the aquatic sportsman; and he is frequently instrumental in saving human life when threatened with a watery grave.

NEW YEAR'S DAY.—The anniversary of the first day of the new year, which in England is observed as a sort of holiday, parties and other entertainments being given to celebrate the event. The custom of seeing the old year out and the new one in, is observed while the clock is striking the hour of twelve on the last night of the old year, and this event is hailed in a variety of ways, according to the sentiments and habits of the persons engaged in the celebration. The etiquette observable on New Year's Day is to wish every friend that is met with "a happy new year." It is also customary to make presents of a suitable nature, known as New Year's Gifts.

NIGHT DRESS.—Upon retiring to rest the whole of the apparel worn during the day should be taken off and exchanged for a dress suitable for sleeping in. This dress should be made loose and long, and the strings, buttons, &c., should be so placed that when they are fastened they do not cause any pressure of the neck, wrist, &c. The material of which the night dress is made should be cotton, and that worn in winter should be of a stouter fabric than the one used in summer. The night dress should be changed every week, and before it is put on care should be taken that it is thoroughly aired. The night cap is sometimes included as part of the night dress; generally speaking, this is a useless and unhealthy covering, as it generates too great an amount of heat about the head. Some persons, owing to use and habit, cannot leave off their night cap without catching a severe cold, and in such cases, it is obviously better to adopt it than not.

NIGHT LIGHT.—Many persons cannot sleep without a light in their chamber, and in cases of sickness it is frequently essential that there should always be a light burning. For this purpose a rushlight is frequently set up; but an improvement on these has been recently introduced in the shape of night-lights, which are made and sold by several manufacturers. These night-lights are merely very short pieces of stearic acid or stearine with a fine wick, and are burnt either by means of a glass in which they are dropped, and which serves to hold the material when melted, or by enclosing them in a thin roll of paper or wood-shaving; in which latter case, they require to be placed in a shallow vessel of water, about a quarter or half an inch deep in that fluid, so as to prevent all danger of the envelope catching fire. The advantage of these lights is that

they have no disagreeable smell, and give a steady and certain light for many hours. A small camphine night-light is sold, which is a very useful addition to the bed-chamber, and an exceedingly cheap mode of keeping up a nocturnal glimmer sufficient for all ordinary purposes. This little lamp is merely a common reservoir, with a simple tube containing a common cotton wick; this is



invested with a hollow cone of metal, to the inside of which the air is admitted, and which may be raised or covered upon the flame at pleasure. It burns very steadily, and gives a light sufficient for the purpose at the cost of a farthing for nine or ten hours. Persons should endeavour to sleep without lights in their bed-chamber if they possibly can, for, independent of the danger attending the practice, it is very unwholesome, as the flame consumes the oxygen, and thus deprives the sleeping person of a gas which is very essential to health.

NIGHTINGALE.—Great care and attention are necessary to render this bird sociable and healthy in confinement. Nestlings may be taken at the middle or latter end of May; but they should not be removed until they are fully fledged, as they are very tender birds. As soon as the nest is taken, place it in a small basket, and



cover it up warm. Begin to feed the young birds on small caterpillars, mealworms, or fresh ants' eggs, mixed with a small portion of white bread, grated and moistened. When they are able to feed themselves, put them singly into nightingale cages with a little dry straw or moss at the bottom; and a few days afterwards, place a pan of water in the cages for the birds to wash in. On first placing them in the cage, it is necessary to cover two or three sides of it from the light, as the bird is so much alarmed when exposed at all sides that it soon ends its life by dashing itself against the bars. The situation of the cage must depend on the disposition of the bird, which can only be discovered by shifting him to various parts of the room, till by his cheerfulness and singing, you find you have selected the right place. The best food of this bird is in summer, ants' eggs, to which are daily added two or three mealworms. When ants' eggs cannot be procured fresh, roasted ox-heart or lean beef and carrot, must be grated and mixed with dried ants' eggs. The best and cheapest food in autumn, is very ripe elderberries, dried, and mixed with ants' eggs. The cage must be supplied with fresh water every day, both for drinking and bathing. The health of the nightingale suffers most during the period of molting. Its stomach at that time becomes out of order, which is indicated by the bird resting his head beneath his wing for some hours, with his eyes half

closed and his feathers ruffled up. When these symptoms are observed, give the bird ants' eggs, together with a spider or two, and steep some saffron in his water till it is tinged a deep orange colour. The bird is also liable to cramp, and other diseases arising from damp, cold, and want of proper attention to cleanliness; and in autumn he frequently becomes fat and husky, and refuses his food. In both cases, let him have two or three spiders per day. When his fat is reduced, keep him very warm, and put saffron in his water. Sometimes the nightingale is afflicted with atrophy, or wasting, and soon becomes thin and worn. When this is the case, give him a fig, chopped very small among his meat, and make him swallow a house-spider. A rusty nail should be put in his water, which will act as a tonic. After having been two or three days in confinement, he is liable to diseased feet. To heal them, they must be frequently soaked in warm water, and the loose skin and scales when sufficiently softened, tenderly removed. If they have become very sore, bathe them in warm water, dry them, and anoint them with fresh butter. *The hedge nightingale may be distinguished by being marked with white, especially about the throat. The female is smaller, duller in colour, and has a greenish hue on the back; she is not so erect as the male, her eyes are smaller and less lively, and her throat is not so white.*

NIGHTMARE.—This well-known and terrible visitation to sleeping persons, is in most cases the result of a person's own imprudence. The explanation of the nightmare is this: as the functions of the body are performed more slowly during our sleeping than our waking hours, a full meal or supper, taken immediately before going to bed, imposes a load on the stomach which it is not in a condition to digest, and the unpleasant consequence of oppressive and harrowing dreams is almost certain to ensue. When the sleeper lies upon his back, the heart pressing, while pulsating, on the lungs, gives rise to a sense of intolerable oppression on the chest, which seems to bear down upon the whole body, so that in this painful state not a muscle will obey the impulse of the will, and every effort to move appears to be altogether unavailing. To escape this attack, therefore, it is obvious that a hearty meal should not be taken just before going to bed, and if one is taken in the evening at all, rest should not be sought until such time as the food has gone through the more difficult part of digestion.

NIGHTSHADE.—The *garden nightshade* is an annual plant common in this country, and grows about rubbish and dunghills. The flower is very like that of the common potatoe. The stalk is about a foot in height, the leaves are alternate, irregularly ovate, waved in the margins, and covered with sort down. The fruit is a round, two-celled berry, of a black colour when ripe, and contains several kidney-shaped yellow seeds. The smell of the plant is faint and disagreeable. It has very little taste, but it possesses narcotic qualities, and even its

odour is said to cause sleep. The berries are equally poisonous with the leaves. The



woody nightshade is also a common plant, which grows in hedges and moist situations. The stalk is tender, climbing, covered with bark of an ash colour, and rises to six or seven feet in height. The leaves are long, oval, and pointed; those near the top are spear-shaped. The flowers are purple-coloured, with long yellow anthers. The fruit is an oblong reddish berry, containing many flat yellow seeds. The roots and stalks, on being chewed, first cause a sensation of bitterness, which is soon followed by a considerable degree of sweetness. The berries act powerfully on the stomach and bowels, exciting both vomiting and purging. As the nature of these berries is so very deleterious, and as they are very common in hedges, and may be easily mistaken by children for red currants, which they somewhat resemble, the greatest care should be taken to point out their danger.

NITRE.—A valuable medicine, which acts in a variety of ways, and principally in cooling and purifying the blood. It is used externally as a detergent, when dissolved in water, and as a lotion to inflamed and painful rheumatic joints. It is given internally in doses of from ten grains to a drachm, or even two drachms. As a topical application it is beneficial in sore throat, a few grains being allowed to dissolve in the mouth. In the feverishness that attends a cold, from seven to ten grains of purified nitre, in a glass of water, may be taken two or three times a day with safety and advantage.

NITROGEN.—A gas which enters largely into the composition of the air. It is not combustible; it enters extensively into combination; it is an abundant element in animal matter; and its existence in such a large quantity is a chief distinction between the constitution of animal and vegetable life.—See *Dictionary of Useful Knowledge*, article **NITROGEN**.

NORFOLK CAKE.—Take three-quarters of a pound of butter, three pounds and a half of flour, and a quarter of a pint of yeast. Melt the butter with water, knead well till stiff, and bake on buttered paper for twenty minutes.

Butter, $\frac{3}{4}$ lb.; flour, 3 $\frac{1}{2}$ lb.; yeast, $\frac{1}{4}$ pint.

NORFOLK DUMPLINGS.—Take a pound of dough from a baking of very light white bread, and divide it into six equal parts; mould these into dumplings, drop them into a pan of fast boiling water, and boil them quickly for a quarter of an hour. Send them to table the instant they are dished, with some sauce or raspberry vinegar. They should not be cut, but torn apart with a couple of forks.

NOSE, AFFECTIONS OF THE.—The membrane that lines the whole alimentary canal from the lips and mouth downwards, has special peculiarities in particular places, according to the function it has there to perform: in the nostrils, as the external seat of smell, it is beautifully and remarkably adapted for its purpose; yet, though being so incessantly in active operation, it is, perhaps, the least affected part of the body. With the rest of the lining membrane of the mouth it suffers from cold, or in affections of the stomach, discharging a thin fluid in cases of catarrh, and showing a dry, red, and irritable surface when the bowels and stomach are affected, hence the involuntary picking of children when they have worms; but of itself, besides a thickening of its coats from different causes, and thereby blunting the perception of smell, and obstructing the reverberance of articulation, and the occasional formation of that extraordinary zoophyte, the polypus, high up in the nostril, this part of the frame has no other disease appertaining to it. For the first, an occasional errhine, as a pinch of snuff, or the smallest atom of the white of hellebore powder, imbibed in the same way, with a course of aperient medicine, is all that is generally needed; though cases may occur in which leeches and a lotion may be demanded, but they are, however, very rare. The extraction, by surgical means, of the polypus, as no local or constitutional treatment has any effect on its growth, renders any further account here of this disease unnecessary, and the mode of procedure will be found under its proper head. The external parts of the nose are, however, more frequently affected than the internal, the cuticle over the cartilage being subject to warts, inflammation, small painful pimples and abscesses, and to cancer. The warts are easily removed by a daily application of caustic or hne stone; the inflammations, by a cold lotion of sugar of lead and water; and the pimples and abscesses, by the same means assisted with cooling purgatives. For the more formidable disease of cancer, surgical aid must be obtained, as the treatment, in unskilful hands, might be attended with risk.

There is a condition of the nose, usually, but not always justly, attributed to persons of dissipated habits, in which that feature

becomes enlarged, of a red or purple colour, and covered with unseemly blotches, pimples, and bright-coloured excrescences, distending the organ sometimes to an enormous size. Though this disfigurement, undoubtedly, frequently marks the drunkard, it is more properly an indication of diseased liver than a characteristic of dissipation, and is more usually found in its worst form in persons of temperate, than intemperate habits. As this disease is in general a local symptom of a constitutional derangement, the remedies to cure it must more properly be applied to the system rather than the part. For this purpose a course of the Plummer's pill, alternated with blue pill, and a decoction of dulcamara, and dandelion in water, two ounces of each, boiled from four to three pints, and a wineglassful taken every four hours, and a pill twice a day, must be continued for some days, or even weeks; at the same time the nose should be enveloped in a poultice made of scraped Solomon's seal, damped with vinegar, laid next the skin; and being put on at bedtime, should be allowed to remain all night.—See BLEEDING, HÆMORRHAGE, &c.

NOTICE TO QUIT.—When either a landlord or a tenant intends to terminate a tenancy, the way to proceed is by a *written* notice to quit, which is drawn up in the two following forms:—

From a tenant to his landlord.—Sir, I hereby give you notice, that on or before the day of next, I shall quit and deliver up possession of the house and premises I now hold of you, situate at in the parish of in the county of

Dated this day of 18 .
Witness, G. C. L. O.

To Mr. R. A.

From a landlord to his tenant.—Sir, I hereby give you notice to quit the house and appurtenances which you now hold of me, situate at No. , on or before next.

Dated 18 .
Signed, R. A. (Landlord).

To Mr. L. O.

The legal term of notice is six months, to expire on the same day of the year on which the tenancy commenced. When the rent is payable weekly or monthly, the notice will be good if given for the week or month, provided care be taken that it expires upon the day of the week or month of the beginning of the tenancy. If a tenant holds over after receiving a sufficient notice in writing to quit, he becomes liable to pay double the yearly value; if he holds over after having himself given even verbal notice, he is liable to pay double rent. There is no necessity for notice to be given before twelve o'clock in the day, any hour at which reasonable access can be gained will be sufficient.—See LANDLORD AND TENANT; LEASE; LODGERS, &c.

NOUGAT.—An article of confectionery, composed as follows:—Blanch a pound of sweet almonds, and having sliced them lengthwise, let them lie in the suu for a short time, until they become slightly discoloured, then dissolve in an iron stewpan, slightly buttered, three-quarters of a pound

of sugar, without water, stirring constantly and when the sugar has melted and begins to change colour, throw in the almonds, which are to be previously made thoroughly hot in another vessel, over the fire, taking care not to burn them: mix them well with the sugar, and as they mix range them round the sides of the stewpan, leaving about the same thickness at the bottom as at the sides; leave the saucepan to cool, and turn out the mixture upon a plate; having done this, press the contents well together in the form of a thick cake, and wrap them up in writing paper. It should be kept in a tin case. Nougat is served at dessert, or eaten at any time, as other sweetmeats.

NOUN.—In grammar, a part of speech which signifies the names of persons, places, and things. The name of everything that we can touch, see, hear, taste, or smell, is a noun. Proper nouns are distinguished from common nouns in expressing the names of persons, places, &c.; and as such are always written with a capital initial, as Robert Smith, Manchester, the Thames, the Isle of Wight, &c.

NOVELS.—Works of fiction, the incidents and characters in which are supposed to be based upon and drawn from real life. The most highly esteemed of this class of literature are those written by Walter Scott, Fenimore Cooper, Captain Marryat, Miss Austen, Miss Porter, Bulwer Lytton, Mrs. Trollope, G. P. R. James, Mrs. Gore, Charles Lever, Anthony Trollope, Mrs. Marsh, Miss Muloch, and Miss Kavanagh, &c.

Although this class of reading is well adapted to pass away an idle hour, readers, especially young ones, should guard against imbibing too great a desire for novel reading; by such an indulgence the mind becomes imbued with false sentiment, and rendered unfit to cope with the every-day business of life. In short, a novel is a book which should only be taken up when every duty is performed, and when the reader has become well-grounded in the higher and more useful departments of literature.

NOVEMBER, GARDENING FOR.—*Kitchen garden:* Artichokes, complete beds. Asparagus, cut down and dress beds with litter or dung. Beans, sow. Broccoli, take up and lay flat in dry ground. Carrots, take up and store away from frost. Cauliflower, seedlings, protect by hoops and mats. Celery, earth up as high as possible. Colewort, plant. Endive, protect. French beans, prolong fruiting. Leeks, sow. Parsley, protect with fronds of fern. Parsnips, take up, trim off crowns and fibres, and store in sand or charcoal. Peas, sow. Perennial herbs, propagate. Potatoes, take up as wanted. Radishes, sow short-topped in a warm border. Rhubarb, plant.

General remarks.—During this month dig, trench, manure vacant ground, and execute all other routine work. Weed seedling crops. Destroy insects, and particularly snails. Protect the root cellar from frost if it sets in severely; and keep out the water from above and below. Turn over the edible roots which are stored, and pick out decaying bulbs. Examine seeds and separate

those that are worthless from the better sort.

Flower garden.—*Anemones*, plant during the first fortnight. *Asters*, protect from frost and rain. *Auriculas*, change upper soil, and remove decayed leaves. *Border flowers*, dried roots of, plant. *Bulbials*, take up tubers and protect from frost. *Daisies*, plant. *Hyacinths*, plant during the first fortnight. *Marvel of Peru*, take up roots and protect from frost. *Mignonette* (potted), remove indoors. *Polyanthus-Narcissus*, plant in the early part of the month. *Ranunculuses*, plant in the first fortnight. *Shrubs*, plant for forcing, prune, and keep in form to encourage flowering. *Sweet peas*, sow for an early crop. *Tulips*, plant during first fortnight.

General remarks.—This is a busy month in the flower-garden. Transplant triennials at the beginning of the month, if the weather be fine. Protect tender roots by litter, leaves, tan, ashes, or larding-up; trees, by mats or straw covered with mats or nets. Take care of seedlings. Collect earths, composts, and manures; and in general finish digging among herbaceous flowers by the middle of the month. In cutting straggling plants, choose a dry day, and obliterate foot-prints with a fork. Clear off all dead and decaying leaves and stems. Reduce the patches of perennial flowers. Fill up vacancies. Repair edges, and give the garden a general brushing over, laying all as neatly for the winter as possible. Some of the operations directed to be done in this month may be executed sooner or later, as the weather or convenience allows.

NOVEMBER, THINGS IN SEASON.—*Fish*—Barbel, brill, turbot, carp, eckles, eod, crabs, dace, dory, eels, gudgeon, gurnets, haddocks, hake, halibut, herrings, ling, lobsters, mussels, oysters, perch, pike, plaice, prawns, salmon, shrimps, skate, smelts, soles, sprats, tench, thornback, turbot, whiting.

Fruit.—Almonds; apples: golden pippin, Holland pippin, Kentish pippin, noupareil, winter pearmain, Wheeler's russet; bulb-laces, chestnuts, hazel-nuts, grapes, medlars. Pears: Bergamot, Charmonnelle, Colmar, Cresan, Spanish, bon chrétien; walnuts.


Meat.—Beef, house-lamb, mutton, pork, veal, doe-venison.

Poultry and game.—Chickens, dotterel, ducks, fowls, geese, grouse, hares, larks, moor-game, partridges, pheasants, pigeons, rabbits, snipes, teal, turkeys, wheat-ears, widgeon, wild ducks, woodcocks.

Vegetables.—Jerusalem artichoke, chard, beets, borecole; cabbages, cardoons, carrots, celery, chervil, coleworts, enive, herbs of all sorts, leeks, lettuces, onions, parsnips, potatoes, salad, savoy, shalots, spinach (winter), tomatoes, turnips.

NOYEAU.—Blanch and pound two pounds of bitter almonds, and put them into a gallon of pale brandy, with two pounds of white sugar candy, a nutmeg grated, and half an ounce of mace. Stir it about well every day for twelve days, then leave it for six weeks, when it may

be bottled, but must be kept some months before it is ready for use.

 Almonds (bitter), 2lbs.; brandy (pale), 1 gallon; sugar candy, 2lbs.; nutmeg, 1; mace, ½oz.

NUISANCE.—This term signifies generally anything that does hurt, inconvenience, or damage to the property or person of another. Nuisances are of two kinds, public and private, and either affect a community or an individual. The remedy for a private nuisance is by action on the case for damages, and for a public nuisance by indictment. It must be done without riot, if at all. Every continuance of a nuisance is a fresh nuisance, and a separate action will lie.

NUMBNESS.—This may proceed from temporary loss of nervous action, as long-continued pressure in one direction, or standing in water or on a damp spot, and is generally counteracted by warmth, friction, or the hot bath. Friction with the hand is often sufficient, but when more energetic means are required, turpentine and oil, with or without mustard, will answer the end aimed at. When the numbness is attended with loss of motion, paralysis is to be feared. —See FROSTBITE, MORTIFICATION, PARALYSIS.

NURSE, FOR CHILDREN.—For this office there are two kinds of nurses, the wet nurse and the dry nurse. *The wet nurse* acts as a substitute for the mother, or aids her when there is a deficiency in the maternal supply of milk. When a wet nurse is required, the selection should be left to the medical attendant. The following are deemed sure characteristics of a good nurse:—She should be between twenty-five and thirty years of age, strong in constitution, full-chested, of sanguine lymphatic temperament, brown-haired, with perfect and white teeth, and full red lips. The milk drawn into a spoon should be white, with a slight bluish tint, its taste saccharine, and its consistence not too thick. In addition to the physical qualifications of a wet nurse, her mental capacity and moral deportment should also be regarded. Her temper and disposition have much to do with the healthy nurture of the child, for it is well known that mental emotions are apt to affect the milk, and so act upon its properties as to render it pernicious to the child. Temperance in eating and drinking, is another important qualification; the latter especially, for when a nurse is addicted to an immoderate use of stimulants, the greatest injury is likely to be inflicted on the suckling infant. The offices of a wet nurse should be made available only where a positive necessity exists: the suckling of a child is the natural office of the mother, and while it does not injure the parent is calculated to be of the greatest benefit to the infant. It should also be borne in mind, that the child will naturally place its affections where it receives its sustenance, and will love the nurse in preference to the mother; and although this may in time wear off, the estrangement while it lasts causes great pain to a mother's heart. *The dry nurse* is

a person who brings up a child by hand when the mother is incapable of suckling her child, and a wet nurse cannot be substituted. As the person thus selected is generally removed out of the mother's reach, great care should be exercised in making the selection. A sensible, kind, and patient person, who possesses some knowledge of the natures and habits of children is indispensable; and the person most likely to possess these qualities, is one who has had children of her own. When parents thus intrust their children into the hands of a dry nurse, it would be well if they paid them a visit from time to time, quietly and unexpectedly; for it is sometimes the case, that children thus situated are neglected, save at such times when a visit from the parents or friends is expected.

NURSE, FOR THE SICK.—In cases of illness, the patient's recovery depends almost as much upon the nurse as upon the medical treatment; and it is absolutely necessary that some one should be in attendance on the sick, to carry out the directions of the doctor, and to administer to the numerous wants of the patient. The person chosen for this office, should be neither too young nor too old, and few are fit to occupy such a post under thirty years of age, or to retain it beyond sixty. As a matter of course, a nurse should enjoy good health and possess the strength and stature necessary for lifting and moving the patient. Activity, order, and cleanliness are indispensable. A cheerful temper and an obliging disposition, it is almost needless to mention. All bad habits, such as snuffing, smoking, and immoderate drinking, are to be decried; also unusual and irritating noises, as coughing, sniffing, humming, &c. A nurse ought to be a light sleeper, awake to the slightest call or movement, and no snorer; she should also be quick and yet light in her movements, and able to perform all her offices without noise or haste. It is frequently necessary that a nurse should be able to exercise considerable influence over the invalid, and to accomplish this she must be firm without being rough, and determined without exhibiting anger. Good judgment on the part of the nurse is of great consequence; thus, in conversing with the person under her care, she should avoid all topics of a gloomy and repulsive nature; and having studied the whims and prejudices of the invalid, endeavour to interest and amuse, by discoursing upon congenial topics. A nurse ought to be able to read perfectly, so that she may administer the medicine, and follow other written directions without error. This qualification will also render the nurse an agreeable companion, as she may read to the patient when he is unable to do so himself. Even the dress of the nurse should be studied, she should not attire herself in habiliments either of too sombre or too gaudy a character, a light-coloured and neat apparel will be most grateful to the eye. Nurses are entitled to a certain amount of consideration from those who employ them. Their confinement in the sick chamber should be relieved

for an hour or two during the day, so that they may have an opportunity of taking air and exercise, both for their own sake and that of the patient. They should also be treated with kindness and respect by the various members of the family, and be made to feel that their offices are rather those of a friend than a menial.

NURSERY, FOR CHILDREN.—It will always be found better, both for the children and the family generally, that a room in the house should be set apart for the sole use of the younger members. The aspect of this room should be south-eastern, or as near that as possible, so that the fullest amount of sun, light, and air may be admitted into the apartment. The room should be situated at the top part of the house, this being not only the most healthy but the most convenient for domestic arrangements generally. The apartment should be large and lofty, and sparsely furnished, so that the children will be less likely to hurt themselves when falling or running about. In fine weather the windows should be opened, and this should also be done on quitting the apartment for a time. The outsides of the windows should be guarded by strong iron bars, closely fixed, to prevent the possibility of a child falling through. The utmost cleanliness should be observed, the room being kept well scrubbed and swept, and every article in it thoroughly dusted. Certain rules should be laid down to promote the moral and physical welfare of the children; and every mother should pay a daily visit to the nursery, in order to assure herself that these rules and regulations are being carried out.

NURSERY, IN HORTICULTURE.—A reserve garden, or portion of a garden, devoted to the rearing of trees, shrubs, and hardy plants, during their early stages of growth, before they are destined for the fruit or pleasure ground. Nursery culture embraces every part of gardening. The essential part is the art of propagation; even grafting, budding, and layering require to be carefully, skilfully, and expeditiously performed, and the future progress of the scion, bud, or shoot carefully watched. Next to propagating, rearing requires attention, and especially transplanting and pruning. In a nursery for fruit trees, the following rules should be observed. That the soil should not be better than that in which the trees are to be planted out. That the soil ought to be neither too wet nor too dry, but of a medium nature—though, of the two extremes, dryness is to be preferred. The ground must be enclosed in such a manner that neither cattle nor vermin can come in, and so as to exclude especially hares and rabbits. The ground, after being enclosed, should be carefully trenched about two feet deep in August, and when trenching, the ground should be cleansed of the roots of all noxious weeds. The season arrived for planting, level down the trench, about the beginning of October, and then lay out the ground into quarters, and prepare the beds, in which the seeds or stones of the fruit may be

sown. Transplant the stocks in the second year; draw a line across the ground, and open a number of trenches exactly straight; then take the stocks out of the seed beds, in doing which the ground should be raised with a spade, in order to preserve the roots as entire as possible; prune off the very small fibres, and if there be any that have a tendency to root directly downwards, such roots should be shortened. Then plant them in the trenches, if they are designed for standards, in rows, three feet and a half or four feet from each other, and a foot and a half distant in the rows; but if for dwarfs, three feet row from row, and one foot in the row, will be a sufficient distance. These plants should not be headed or pruned at top. If the winter should prove very cold, lay some mould on the surface of the ground near the roots of the plants, taking care not to let it lie too thick near the stems of the plants, and to remove it as soon as the frost is over. In the summer season destroy the weeds, and dig up the ground every spring between the rows.

NURSERY GOVERNESS.—The person selected for this post should not be too young, or her authority will be in all probability disputed by the children placed in her charge. The accomplishments essential for the post will differ according to the social position of the family, and the peculiar views of the parents. Generally speaking, they comprise the rudiments of a plain education, and music, French, and drawing. In teaching children, however, much depends on the temper and disposition of the instructor. A person with moderate acquirements, and possessing a winning manner, will be able to impart a great deal more to her pupil, than a governess who, however highly accomplished, is stern and austere in her mode of teaching. It would be well, therefore, for a nursery governess first to secure the affection of her young charges, and then, by the same line of conduct, to guide them through their studies, as though it were a pastime rather than a task. Her temper will be frequently sorely tried, but she should remember that children are naturally wayward and capricious, and she should humour rather than vex them. The disobedience or the good conduct of a child may be regulated by a mere word or look. A certain measure of periodical arrangement can scarcely be introduced too early; even at the age of three, the infant may be initiated into a methodical distribution of time: thus, the breakfast, the morning walk, the mid-day sleep, the dinner, the evening ablutions, and, finally, the prayers, should each have their allotted hour, and that hour be observed with strict punctuality. In addition to the usual hours of instruction, the principle of imparting knowledge should be carried out in ordinary conversations. It may begin with the morning walk: and with very young children this is the best opportunity for conversational instruction. Every object may be made subservient to the purpose. In the country, the names and description of trees, flowers, or shrubs; the qualities

and use of cattle, or agricultural implements, the occupation of field labourers, the nature of farming, the conversion of corn into bread, &c. In town, the use of shops, the nature of buying and selling, the variety of trades, the utility of carts, drays, and carriages of all kinds, with numerous other objects which are constantly meeting the eye.

NURSERY MAID.—The proper selection of a person for this situation is of great importance to the moral and physical training of a child. A nursery maid should have a natural fondness for children; she should be lively enough to amuse them, yet sedate enough to check herself and them from exceeding the bounds of prudence and propriety. Firmness on all important points should be united with good nature. There must also exist a vigorous state of health, and yet a lively sympathy with the ailments of the young. The age at which a nursery maid should be selected is difficult to assign. Young women are possessed of a flow of animal spirits, best in keeping with the playfulness of the child; but they are frequently wanting in steadiness. A more elderly person, on the other hand, is apt to be somewhat too staid in her demeanour, and with settled habits that cannot brook being disturbed by the pranks of the child. When these opposite qualities are found to blend in one and the same person, there should the choice be made.

NUTCRACKERS.—An invention at once simple and useful in this direction, is shown in the accompanying engraving. The old style of nutcracker is at best an awkward



contrivance, and uncertain in its operation, sometimes scarcely breaking the shell at all, and at others crushing the whole nut to pieces. In the nutcracker here shown, instead of the flat plates, there are oval hollows, with toothed borders. The nut drops into this hollow, and the shell is cracked without injury to the kernel. It also takes an instantaneous hold of the nut, however large or small, and with a gentle pressure of the hand, effectually cracks it without the slightest possibility of the nut escaping.

NUTMEG.—Nutmegs are of two kinds, the *myristica* and the *pyrrhosa*. The nutmeg is tonic, stimulant, and anti-spasmodic, and is frequently given in cases of indigestion and flatulence. In cookery, pastry, &c., it is more particularly used as a spice, on account of its fragrant and agreeable taste. The preparations of it in medicine are various, namely, infusions, tinctures, confections, &c.; and as a distilled water, as a vehicle for the administration of other medicines. The essential oil is used as a perfume, and also as an external application in cases of rheumatism.

The economical use of nutmegs is well worth knowing; if a person begin to grate a nutmeg at the stalk end, it will prove hollow throughout; whereas the same nutmeg, grated from the other end, would have proved sound and solid to the last. This circumstance may be thus accounted for. The centre of a nutmeg consists of a number of fibres issuing from the stalk, and its continuation through the centre of the fruit; the extremities of which fibres, though closely surrounded and pressed by the fruit, do not adhere to it. When the stalk is grated away, those fibres, having lost their hold, gradually drop out, and the nutmeg appears hollow; as more of the stalk is grated away, other fibres drop out in succession, and the hollow continues through the whole nut. By beginning at the other end, the fibres above mentioned are grated off at their core end with the surrounding fruit, and therefore do not drop out or cause a hole.

NUTMEG ESSENCE.—Dissolve an ounce of the essential oil of nutmeg in a pint of rectified spirits. In confectionery and culinary preparations, this is an invaluable essence, although somewhat expensive.

NUTS, DIETETIC PROPERTIES OF.—All kinds of nuts are extremely difficult of digestion, and at the time that they are usually eaten, namely, immediately after dinner, they are especially injurious. Persons with delicate stomachs or any affection of the chest, should scrupulously avoid eating nuts at any time; and when they are partaken of, they should be eaten with a little salt, which assists their digestion.

NUX VOMICA.—A tree indigenous to the East Indies. The seeds afford the substance known as nux vomica. This may be classed among the most powerful of veg-



table narcotics. To man and most animals it proves a virulent poison. Administered to dogs, cats, rats, rabbits, and several kinds of birds, it produces death in a very short time.

O.

OAK.—This is the most valuable of all the timber trees grown in Great Britain. All the species are readily raised from their acorns, sown as they drop from the tree, or collected, dried, and kept packed in sand in a dry place until the following March. For raising the seeds in the nursery, a good fresh loamy soil is selected. Having prepared the beds, the acorns, which should be carefully selected and taken from the finest trees, are to be sown about three inches apart and covered over with soil. This operation is best performed in February, although some prefer the autumnal months. In about six weeks the plants will appear above ground, and in these beds they may remain for two years, without any further care than keeping them free from weeds. The ground, when they are to be planted out, must be prepared by deep trenching or ploughing several times. The plants are then pulled up, the tap root cut off, and a sufficient hole being made with a spade, successively placed into the fresh earth, in rows four feet apart. In raising oaks from the seed, the ground is to be prepared in the same manner, and marked out into lines or spaces. The acorns are then deposited about ten inches apart in a hole made with a dibble, and covered up. In all cases of planting, shelter and warmth are essentially necessary; and when the aspect is unfriendly, the plantation should be skirted to a sufficient density with Scotch firs, mixing some of them also in the body of the wood. In this manner an exposed situation may be made to produce excellent timber; and when the trees are grown to a size sufficient for their own protection, the firs in the centre should be removed, otherwise they will injure the young oaks. On the judicious thinning and clearing of young wood depends much of the planter's success and profit. In default of acorns, most of the foreign sorts may be grafted on the common kinds. The young plants are transplanted twice or thrice in the nursery, and when four or five years from the acorn, may be removed to their "final stations." Most species of oak will grow in a deep clayey loam; but a good gravelly loam upon a subsoil of blue ferruginous clay, produces the finest timber in the shortest time; they will grow in any soil not marshy, not attaining, however, any considerable size in a poor sandy soil or at a considerable elevation. Particular varieties are kept up by grafting. The common British oak, flowers in the spring; generally beginning to open about the first or second week in April; about the third week the leaves begin to appear, at which time the flowers are in full bloom; and about the beginning of May, the leaves will be quite out, and remain until the autumnal frosts come on. When the oak

grows alone it is moderately low, and its branches spreading. In this case the timber is also said to be more compact and stronger, and the crooked arms or branches better suited for ship-building. The wood of the oak, though full of minute pores, forming to appearance a spongy net-work, is yet of great strength and durability. For general purposes, the oak is useful at every age, and more durable when of small diameter than that of any other of the hard woods. The value of the bark of young trees for tanning is greater than that of such as are old.

OAK WOOD, IMITATIVE.—A colour which imparts to wood the appearance of oak is compounded as follows:—The basis consists of three-fourths of ceruse, and a fourth of ochre de rue, umber earth, and yellow de Berri, the last three ingredients being employed in proportions which lead to the required tint; a colour will thus be formed equally proper for distemper, varnish, and oil.

OAKUM.—The substance with which old ropes are reduced when they are untwisted, loosened, and drawn asunder. It is principally used in caulking the seams, tree-nails, and heads of a ship, for stopping or preventing leaks.

OAR.—A long piece of timber, flat at one end and round or square at the other, used to make a vessel advance upon the water. —See ROWING.

OAT.—This is a very useful grain, and more peculiarly adapted for northern climates than either wheat, rye, or barley. The varieties of oats are numerous, the most commonly cultivated are the long black oat (*fig. 1*), and the white oat (*fig. 2*).



Fig. 1.

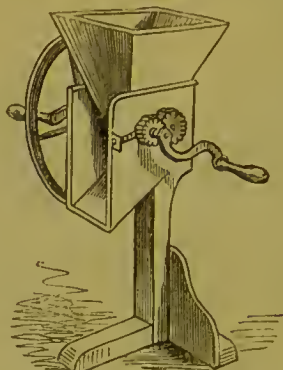
Fig. 2.

The soil for oats may be any kind whatever, from the stiffest clays to moss or bog, provided it be laid sufficiently dry. The most tenacious clays and meagre gravels and sands will produce a crop of oats, if ploughed at a proper season and the seed judiciously

sown and covered. The preparation of the soil for oats is less than for any other grain. It is almost always the first crop on newly broken-up lands, and as it prospers best on a soil not too finely pulverized, it is commonly sown on one earth. In regular rotations, oats are generally sown after grass; sometimes upon land not rich enough for wheat, that has been previously summer-fallowed, or had carried turnips; after barley, and rarely after wheat, unless cross-cropping from particular circumstances become a necessary evil. One ploughing is generally given to the grass lands, usually in the month of January, so that the benefit of frost may be gained, and the land sufficiently mellowed for receiving the harrow. The best oats, both in quantity and quality, are those which succeed grass. *The climate for oats* should be cool and moist; when dry and warm, the panicles are so dried and contracted that they cease to convey sufficient nourishment to the ears, which thus become unproductive. *The season for sowing oats* is from the last week in February to the end of April. About the middle of March is most generally preferred. The seed should be plump, fresh, and free from the seeds of weeds. The quantity of seed, where oats are sown broad-cast, is usually from four to six bushels to the acre. *The mode of sowing* is almost universally broad-cast; but where they are sown after turnips, or on other well pulverized soils, the row-culture is sometimes adopted. *The after-culture* depends on the mode of sowing, but seldom consists of more than weeding before the flower-stalks begin to shoot up. *In harvesting oats in England*, they are generally cut down with a scythe, and carried loose to the barn or stack. Oats are ready for reaping when the grain becomes hard and the straw yellowish. They should generally be cut before they are dead ripe, to prevent the shedding of the grain, and to increase the value of the straw as fodder. *The diseases of the oat* are few; sometimes it is found attacked by the smut; but the more common injury sustained by oats is in the form of wire worms, or larvae of insects which generally abound in lands newly broken up from turf. One of the most certain modes of avoiding these is, by not ploughing the ground, especially if old turf, till immediately before sowing. By this means the insect is turned down, and before it can work its way to the surface, the corn is beyond its reach. *The produce of oats* differs materially according to the soil, climate, and the fitness of the particular variety for the land. The highest quantity, soil and climate being favourable, may be estimated at seventy bushels, and the lowest quantity, twenty bushels per acre: the average being about four quarters.


OAT CRUSHER.—As a general principle for economizing horse-corn, and as an essential aid to old animals and quick feeders, the oat crusher, by which the grain is reduced to a coarse meal, is a necessary adjunct to a stable. This implement may be obtained at various prices, according to size

and capacity: its mode of operation is self-explanatory. It is estimated that by the employment of this machine, horses generally may be kept at one-half the ordinary




cost, from the simple reason, that when the corn is eaten whole, a large quantity of it is undigested, and is therefore quite useless as a means of nourishment.

OATMEAL CAKES.—Put a pound of oatmeal in a basin or bowl, take a pint of boiling water, with half an ounce of salt butter or lard melted in it to make the cakes crisp. Pour this boiling over the meal, stirring it as quickly as possible into a dough, and then turning it out upon a baking-board, upon which it is to be rolled until it is as thin as will allow it to hold together, when it is to be stamped into the shape of small round cakes. These are to be first placed on a girdle to make them firm, and afterwards toasted before the fire alternately on each side till they are quite dry and crisp. *To make unfermented cakes.*—Soak a pound of oatmeal for ten or twelve hours in a pint of sour buttermilk. Then rub a quarter of an ounce of carbonate of soda and a little salt into a pound of flour, and mix it with the oatmeal. Roll it out to any thickness required, and bake it in a moderate oven.

 Oatmeal, 1lb.; water, 1 pint; butter or lard, 4oz. *Unfermented cakes*—Oatmeal, 1lb.; buttermilk, 1 pint; carbonate of soda, 4oz.; salt, sufficient; flour, 1lb.

OATMEAL CAUDLE.—Mix together a quart of new ale, a pint of stale beer, and a quart of water; add half a pint of fine oatmeal, six cloves, two blades of mace, half a teaspoonful of nutmeg, and half a teaspoonful of allspice. Set this mixture over a slow fire in a saucepan, and let it boil for half an hour, stirring it well all the time; then strain it through a coarse sieve, add half a pound of sugar, and the rind of half a lemon. Pour into a pan, cover close, and warm before serving.

 Ale, 1 quart; beer (stale), 1 pint; water, 1 quart; oatmeal, ½ pint; cloves, 6; mace, 2 blades; nutmeg, ½ teaspoonful; allspice, ½ teaspoonful; sugar, ½ lb.; lemon-peel, ¼ of 1.

OATMEAL, DIETETIC PROPERTIES OF.—As an article of human food, oatmeal is


not adapted for general consumption, it is deficient in some of the properties which characterize wheaten flour, and is thereby rendered difficult of digestion, except with the most robust. This unwholesome quality, however, may be rectified to a great extent by mixing with the oatmeal an equal portion of Canadian flour.

OATMEAL GRUEL.—This may be either made from the meal itself, or from the prepared grits. In the former case, mix the quantity of oatmeal that is to be used with a little milk or water in a basin; continue mixing it until it is perfectly smooth, then turn it into the saucepan, adding more water or milk until it is reduced to the consistency desired, then boil it and keep stirring until it is done. To make the gruel from the prepared grits, mix up a teaspoonful of meal with a little cold water, and then stir boiling water into this, after which it requires boiling for a quarter of an hour, and should then be strained and mixed with an equal quantity of milk.

In cases of sickness, oatmeal gruel forms a nutritive and light diet. It is essential, however, that it should be very thin, for when thick it is too heating and stimulating an aliment; a little spirits or wine may be added when considered necessary, and it may be sweetened with sugar and acidulated with lemon juice. In no case, however, should butter be added.

OATMEAL PORRIDGE.—This is a favourite preparation for breakfast and other meals in Scotland and the North of England. It is made as follows:—Put as much water as will make the quantity of porridge required into a saucepan, let it boil, then take a handful of meal in the left hand, and drop it gently into the water while stirring the meal and water quickly round with the right; continue doing this until the mixture is of the consistency of thick gruel, add salt to taste, then let it boil for ten minutes, add a little more, boiling water, and boil for five minutes more until it becomes quite smooth; turn into a dish, and serve it with milk.

OATMEAL PUDDING.—Soak four ounces of brown bread and two ounces of oatmeal in a pint of boiling milk; when cold, stir in two eggs, well beaten, and a little nutmeg and sugar; pour the mixture into a buttered basin, and boil it for an hour.

 Brown bread, 4ozs.; oatmeal, 2ozs.; milk, 1 pint; eggs, 2; nutmeg and sugar to taste.

OATS, FOR HORSES.—Oats form the corn food for horses, and are the best general addition to hay. In wet weather, however, they are scarcely sufficiently stimulating, and require the aid of beans for that purpose. The usual proportion is a quartern of oats with half a quartern of beans. Before the oats are given to the horses they should be sifted, and the stones taken out. Oats are liable to become musty, and may be preserved by the following simple method:—Have fixed on the loft above the stable, a vessel resembling the hopper of a mill, and let the grain fall into a square pipe about

four inches diagonal, communicating with a cupboard set into a wall, but with its end so near the bottom that there shall never be above a desirable quantity in the cupboard at a time, which being taken away, another supply succeeds; by this continual motion the oats are kept sweet, which, when laid up otherwise in large quantities, and suffered to lie idle, would turn musty.

OCHRE.—An earthy substance with which some metallic oxide is mixed, commonly of a yellow, brown, or red colour. The colour of such specimens as are dark may be rendered a brighter red by calcination. The ferruginous ochres which are most common, appear to have been produced by the decomposition of the martial pyrites, which consist of sulphur and iron.

OCTOBER, GARDENING FOR.—*Kitchen garden.*—*Asparagus*, cut down and dress the beds with litter. *Beet*, transplant. *Cabbage*, transplant in close rows or in beds, to remain till spring. *Cauliflowers*, transplant in the last week, to receive the protection of frames. *Endive*, transplant in warm borders. *Horseradish* of two summers' growth, take up. *Jerusalem artichokes*, take up. *Lettuce*, sow in the first week. *Mazagan beans*, sow in the last week. *Parsley*, protect on the approach of frost. *Parsnips*, transplant. *Peas* for frames, sow. *Potatoes*, take up. *Radishes*, sow in the first week. *Savoy*, transplant.

General remarks.—During this month trench, drain, and manure. Earth up and stir the surface, only in fine dry weather. Hoe, rake, thin, weed, and dress off all beds of winter crops. As crops are cleared, dig and prepare the vacant ground. Protect all newly risen annuals, and recently deposited seeds. Propagate the alliaceous tribe and culinary perennials. Destroy insects. See that the root-cellar is perfectly dry, and that abundance of sand is laid over the roots. Attend to the putting away of seeds in the store-room, and deposit them securely from vermin.

Flower garden.—*Anemones*, plant in properly prepared beds. *Auriculas*, protect from heavy rains by mats. *Carnations*, shield from frost by matting. *Crocuses*, prepare pots of suitable earth for. *Dahlias*, stake firm against the wind. *Daisies*, propagate by dividing the roots. *Fuchsias*, protect from winter by a framework of seeds and a layer of peat earth and sand. *Hyacinths*, put into water-glasses. *Jessamine*, plant out last year's layers and cuttings. *Jonquils*, put into water-glasses. *Larkspurs*, sow in pots for the following spring. *Laurels*, plant out last year's layers and cuttings. *Mignonette*, put into boxes and pots under cover. *Narcissus*, put into water-glasses. *Pansies*, sow in pots to come in early next spring. *Pinks*, bed out. *Roses*, pot; prune and well stake the standard sorts. *Tulips*, plant seedlings and offsets, but not the main crop.

General remarks.—Prepare composts. Stir the ground only in dry weather. If the season has been very dry, flower-borders may be dug over about the end of the month. Attend to neatness, and remove all the evidences of decay as fast as they appear.

Sow annuals in pits, for prolongation in cold frames and pots, and some of the hardier sorts in warm borders, to come in early next spring, if the weather should prove mild. Transplant biennials and perennials in the nursery to stand till spring. Remove strong plants to where they are finally to remain. Begin at the end of the month to remove Georgina roots to be dried in an open shed, and then carried to the store-room. About the end of the month prepare a heap of light and fresh sandy loam, and a sufficient number of proper-sized pots, for the reception of as many bulbs and tubers as may be required for early and late forelug. Dig the clumps or pots intended for the hardiest sorts of bulbs and tubers, which now require to be put in. Rosaries may be pruned and regu-
lated, laying down the long, short, and straggling branches.

OCTOBER, THINGS IN SEASON.—*Fish:* Barbel, brill, carp, cockles, cod, conger-eels, crabs, dace, dory, eels, gudgeon, haddock, hake, halibut, herrings, lobsters, mussels, oysters, perch, pike, prawns, salmon-trout, shrimps, smelt, soles, tench, thornback, turbot, whiting.

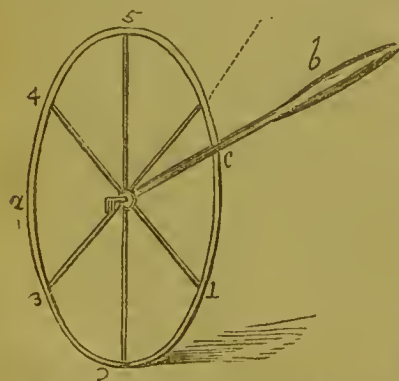
Fruit.—Almonds, apples: pearmain, golden pippin, golden rennet, royal russet; bullaces, black and white, damsons, figs, filberts, hazel-nuts, grapes, medlars, peaches, pears, quinces, walnuts.

Meat.—Beef, mutton, pork, veal, venison (doe).

Poultry and Game.—Chickens, dotterel, ducks, fowls, green-geese, grouse, hares, larks, moorgaine, partridges, pheasants, pigeons, rabbits, snipe, teal, turkeys, wheat-eats, widgeon, wild-ducks, wild-pigeons, woodcocks.

Vegetables.—Artichokes, broccoli, cabbages, cauliflowers, celery, colewort, peas, potatoes, radishes, salad, savoys, skirrets, shalots, spinach, tomatoes, truffles, turnips.

ODOMETER.—An instrument designed for measuring roads on the following principle:—The wheel, (a), is made of light iron,



and measures two yards in circumference, being divided by six spokes into feet. One spoke must be painted white. The handle is divided at c, like a fork, and embraces

each end of the axis by its elasticity. Through the axis is a hole into which the end of the way-wiser fits, and is held fast by a nut. The way-wiser is an index with a face somewhat like a clock, upon which are marked certain figures, which assist in indicating the number of revolutions performed by the wheel. The advantages of this instrument are obvious; any person by merely walking from one end to the other of any road, hedge, wall, ditch, &c., with the odometer, which is not more troublesome than a walking-stick, may arrive at the exact extent more correctly than by a measuring chain.

OIL.—See HAIR OIL, MACASSAR OIL, OLIVE OIL, &c.

OIL-CLOTH.—A material made on the same principle as floor-cloth, but on much lighter and thinner canvas, covered with a fine oil paint and a more delicate pattern; it is chiefly used for table covers, mats, &c. A piece of oil-cloth, about twenty inches long, is a useful appendage to a common sitting-room. Kept in the closet, it can be available at any time to place jars upon, &c., and thus prevent the table or cloth from becoming marked or soiled. For directions for cleaning oil-cloth, see FLOOR-CLOTH.

OILED PAPER.—Brush sheets of paper over with boiled oil, and suspend them on a line until dry. The paper will then be fit for use to tie over pots, jars, &c.

OIL, FOR LIGHTING.—The oil used for giving light, acts upon a uniform principle; namely, by feeding the wick in which it is immersed, as fast as combustion goes on. For the purposes of lighting, various kinds of oils are used, which have special advantages to recommend them; of these, colza oil, which is extracted from seed by pressure, is the most generally used, as it is free from the dirt and unpleasant odour which usually accompany fish oils, hitherto employed for lighting; cocoa-nut oil, and palm oil, are also extensively used, and possess similar advantages. As a general rule, the best lamp-oil is that which is clear and nearly colourless, like water. None but the winter-strained oil should be used in cold weather. Thick, dark-coloured oil burns badly, and it is in vain to try to use it. If the consumption of oil is moderate, it should be purchased in small quantities, as it spoils by keeping; and frequently when it has been kept for several months, it will not light at all. When such is found to be the case, the best plan is to empty it all out, clean the can, and fill it with a fresh supply. Oil should be kept free from all exposure to atmospheric air, as it is apt to absorb considerable quantities of oxygen. To purify common lamp-oil, begin by beating the oil well with a stick, and continue beating; add at four separate times, for twenty-five gallons of oil, a pound and a half of sulphuric acid; a quarter of an hour afterwards add half a pound of tartaric acid in powder, and three pounds of quick-lime; continue to beat this liquid for about twenty minutes, then add six quarts of water, and stir well for five minutes. Four days afterwards, draw off the oil from the water, and

filter it, if it should be necessary, through a hair-bag containing a rather thick bed of animal charcoal. *To economise oil*, dissolve, in a glass of water, as much salt as will fully saturate the water; steep the wick in this, and afterwards dry it; pour into the water an equal quantity of oil, and then put the mixture into a bottle, and well shake it, in order to incorporate it thoroughly; trim the lamp with this mixture, and with the prepared wick. By this method not only will the oil last longer, but all smoke will be avoided.

OIL PAINTINGS, TO CLEAN.—Mix an ounce of spirits of turpentine with an ounce of spirits of wine; with this mixture, wash the paintings gently with cotton wool, then wash them with turpentine alone; if there are any stains which this will not remove, the paintings should be washed with an infusion of kali; when dry, put on a thin varnish, composed of two ounces of mastic dissolved in six ounces of turpentine; at the end of a few days, add another coat of varnish, such as is sold by the colour makers for oil paintings may be added.

OIL PAINTINGS, TO VARNISH.—According to the number of pictures to be varnished, take the whites of an equal number of eggs, and the same number of pieces of sugar-candy, the size of a hazelnut; dissolve, and mix with a teaspoonful of brandy; beat the whites of the eggs to a froth, and let it settle; put the clear liquid to the brandy and sugar, mix them well together, and varnish the pictures with it.

OILSKIN.—Oil is applied to various materials to render them waterproof. If a stout coat or wrapper be wanted, let the material be strong unbleached or brown calico. If a light garment is preferred, make use of brown holland. Soak the article in hot water, and hang it to dry; then boil ten ounces of India-rubber in a quart of raw linseed oil, until dissolved; this will require about three hours' boiling; when cold, mix with the oil so prepared about half a pint of any colour which may be preferred, and of the same consistence as that used for painting wood. With a paint-brush lay a thin coat over the outside of the wrapper, brushing it well into the seams. Hang it to dry in a fair current of air, but sheltered from a powerful sun. When thoroughly dry, give it another coat; dry as before, and then give a third and last coat. The article, when well dried, will be fit for use.

OINTMENT.—A greasy or unctuous preparation, about the consistence of firm butter. The ointments most likely to be useful for domestic practice will be found under their several heads.—See ELDER FLOWER, SPERMACE, SULPHUR, ZINC, &c.

OLIO.—A dish prepared as follows:—Boil three heads of small close cabbages, together with carrots, turnips, potatoes, and small onions; drain them from the water, and cut them into pieces. Mix all together with two handfuls of spinach-leaves, two ounces of butter, three tablespoonfuls of cream, and a little salt and pepper; put

the whole into a stewpan, cover it closely, and stew for two hours; then stir in a piece of butter rolled in flour, and when quite done, serve.

OLIVE, CULTURE OF.—The olive is a low, branchy evergreen tree, rising from twenty to thirty feet, with stiff, narrow, bluish-green leaves. The olive may be propagated by seeds, cuttings, layers, suckers, and inoculation. In England, as a green-



house plant, it is raised from cuttings; but where it is intended to grow a few trees in the forcing department, for the sake of their fruit, a few strong plants should be procured from Genoa, which will produce fruit in three or four years; the trees should be planted as standards in an area, or training on a wall. If a house is not devoted to this fruit, one might be appropriated for it and the pomegranate, giving each its respective soil, and recollecting that the olive will not bear a very high degree of heat. The olive will grow luxuriantly in a strong, clayey, richly manured soil, but will not be so prolific as in a dry, calcareous, sandy, or rocky situation, which ought to be imitated in some degree in the composition prepared for the area or border of the olive-house. In pruning, the object is to have a regular distribution of wood of the former year, from the axils of the leaves of which the flowers spring out. When shoots of three or more years are shortened for this purpose, they do not produce blossoms; but wood of the preceding or current year may be shortened, and the shoots proceeding from them will produce blossoms in due course.

OLIVE OIL.—An oil procured from the fruit of the olive. The oil from Provence enjoys a higher reputation than any other, on account of its being prepared with greater care. This oil is used for a variety of purposes; for salads, for preserving fish, and occasionally as a medicinal agent. *To purify olive oil*, turn it into a crock or bottle, and pour in a quantity of pure water; shake the bottle vigorously, and let it stand for two hours. The mucilaginous matter, which is the cause of rancidity, will be separated

from the oil, and remain in the water. The oil may then be decanted and bottled for use.

OLIVE, PREPARATION OF.—Olives are prepared by steeping them in an alkaline lye, to extract a part of their bitterness; they are next washed in pure water, to which an aromatic, as fennel, &c., is sometimes added. In this form, olives are served at table for the purpose of exciting the palate, and giving a relish to wine; in taste they are rather bitter, and it requires some habit to eat them with pleasure.

OLIVE SAUCE.—Remove the stones from some fine French or Italian olives by paring the fruit close to them, round and round in the form of a corkscrew: they will then resume their original shape when done. Weigh six ounces thus prepared, throw them into boiling water, let them blanch for five minutes; then drain and throw them into cold water, and leave them in it for an hour; drain them well, and stew them gently for twenty minutes in a pint of rich brown gravy; add the juice of half a lemon, and serve the sauce very hot. It may be served with ham and poultry.

Olives, 6oz.; gravy, 1 pint; lemon-juice, $\frac{1}{2}$ of 1.

OMELETTE.—A culinary preparation of French origin, somewhat resembling a pancake or fritter. As omelettes are quickly and easily made, and afford an agreeable addition to a repast, the following general observations respecting them will be found worthy of notice:—The pan used for frying should be quite small, for if the omelette be composed of four or five eggs only, and then put into a large pan, it will necessarily spread over it and be thin; the only partial remedy, when the pan is not of the proper size, is, to raise the handle of it high, and to keep the opposite end close down upon the fire, which will confine the eggs into a smaller space. No gravy should be poured into the dish with the omelette, for if it be properly done it will require none. Should the slight rawness, which is sometimes found in the middle of the inside, when the omelette is made the French way, be objected to, a heated shovel or a salamander may be held over it for an instant before it is folded on the dish. Omelettes may be made in a variety of ways as follows:—*Ordinary Omelette.*—Beat the yolks and whites of four eggs together, with a tablespoonful of milk and a little salt and pepper; put two ounces of butter into a frying-pan, and let it remain until it begins to brown; then pour in the batter, and leave it undisturbed for a minute; turn up the edges of the omelette gently from the bottom of the pan with a fork; shake it to prevent its burning at the bottom, and fry it till of a light brown. It will not take more than five minutes frying. *Sweet Omelette.*—This is nothing more than the ordinary omelette, upon which powdered sugar is put before it is turned; when it is turned, powder the outside also with white sugar, and press upon it a red hot iron; the iron should be about half an inch square, and pressed in streaks from one end to the other. *Friar's Omelette.*—Boil a

dozen apples, as for sauce; stir in a quarter of a pound of butter, and a quarter of a pound of powdered loaf sugar; when cold, add four eggs, well beaten; put it into a baking dish thickly strewed over with crumbs of bread, so as to adhere to the bottom and sides; then put in the apple mixture; strew crumbs of bread over the top; when baked, turn it out, and grate loaf sugar over it. *Omelette Soufflée.*—Put into a stewpan an ounce of butter; when melted, add two tablespoonfuls of flour; stir them well over the fire so that the flour be thoroughly done, but not coloured; add by degrees a wineglassful of boiling cream, and four times the quantity of boiling milk; work it quite smooth, take it off the fire, add four yolks of eggs, sugar to taste, a few grains of salt, and a tablespoonful of orange-flower water; whip up strongly the whites of eight eggs, mix them lightly in the batter, put the whole into a soufflé dish, and bake for an hour. *Omelette with fine herbs.*—After having well beaten up any number of eggs required, and mixed them with a little salt, and a sprinkling of fine herbs, throw the whole into a frying-pan in which a little butter has been previously melted; when fried sufficiently brown, turn the omelette over on the dish in which it is to be served.

OMNIBUS, DIRECTIONS FOR RIDING IN.—Omnibuses, like all other vehicles, always keep to the left-hand side of the road; persons wishing to hail one, should bear this in mind, or they will have a difficulty in making themselves seen by the conductor or driver, and will be compelled to cross the road. On getting into an omnibus, place your hand on the roof as you pass along, to steady yourself, or you will possibly fall upon somebody, and be thrown from one side to the other. It is a sort of tacit understanding that the passenger last arriving should make his way towards the end of the vehicle, and your endeavouring to take an intermediate seat would be resented as an act of aggression. When you have the choice of seats, do not take either the one nearest the driver, or that at the farthest end; in the former case your feet are likely to be trodden upon by the passengers as they come in and go out; and in the latter situation you have a difficulty in making the conductor understand when you wish to alight, and a still greater difficulty in getting out. If, on entering an omnibus you have in your hand a stick or umbrella, turn the ferrule downwards, lest you should thrust it into any person's eye. Have the exact amount of your fare ready in your hand to give the conductor on being set down; or if you require change, settle with the conductor previous to arriving at your destination. Do not linger on the steps when alighting; the least forward movement of the omnibus is almost certain to throw you into the road. Never attempt to alight while the omnibus is in rapid motion; in wishing to oblige the conductor or to show off your agility, you may break your neck. Do not be officiously polite in handing persons in and out of the vehicle, holding their parcels, &c.; this kind of conduct is

always practised by persons who ride in omnibuses for the purpose of plundering the passengers; therefore, by adopting their ways, you may be unwittingly suspected of being one of the gang. When you mount on or dismount from the top of an omnibus, do it calmly and leisurely, first with the left foot, then with the right, then with the left again, and so on; never displace one foot till the other is securely planted. When you are on the roof, or the box seat, hold on by the nearest rail; for if you do not do so, a sudden start of the horses, or a jerk over a rut, is liable to pitch you off into the road.

ONION, CULTURE OF.—For a crop of onions, the soil should be rich, light, deep, and well exposed to the sun; the situation should be open and well drained, and entirely free from trees; if the soil be poor, abundance of manure should be applied in the preceding autumn or winter. Sea-sand, particularly if the ground is at all tenacious, is advantageously employed; coal ashes, and especially soot, are applied with particular benefit. In digging over the ground, small spots only should be turned over at a time, that the texture may be well broken and pulverized. Just before sowing, work and enrich the bed to the depth of eighteen inches, and then beat it flat and firm with a spade. Sow the seed at any time in March, thus: scratch drills by the line just so deep as to be clearly discernible, and scatter the seeds along them about three or four in an inch. Sift fine sandy earth over the seeds, and pat the surface even. In about six weeks after sowing, the plants will be of sufficient size to allow the first thinning and small hoeing, by which they are to be set out about two inches apart. If this be performed in dry weather, it will keep the beds free from weeds for six weeks longer, when they must be hoed a second time, and thinned to four inches apart; and now, where they have failed, the vacancies may be filled up by transplanting there some of the plants thinned out. The best time for doing this is the evening, and water must be given for several successive nights. In transplanting, the root only is to be inserted, and no part of the stem buried. The plants will be much benefited by having liquid manure applied to them twice a week. After the lapse of another month, they must be thoroughly gone over for the last time, and the plants thinned to six inches asunder. After this, they require only an occasional stirring of the surface with a hoe. In order to prevent them running too much to blade, in the month of July, before the tips change to a yellow hue, the stems should be bent down flat upon the bed, which not only prevents the over-growth of the blade, but causes the bulbs to become much larger than they otherwise would. The bend should be made about two inches up the neck. *The gathering of the crop of onions* should not be delayed beyond the beginning or the middle of September; but then full ripeness may be known, by the withering of the foliage, by the shrinking of the necks, and by the ease with which they may be pulled up. As soon

as these symptoms appear, the onions must be taken up, the bed being frequently looked over; for if the whole crop is waited for, the most forward individuals, especially in moist situations or seasons, are apt again to strike root. When taken up, the onions should be spread thinly on the ground, but if the weather be wet, they had better be removed to a gravel walk, or to a space purposely covered with sand or gravel, in the full sun. Turn them over once or twice a day until they are thoroughly dried, and then store them in a well-aired loft or other appropriate place. In the store-house, they must be laid as thinly as possible, and afterwards hung up in ropes, and examined at least once a month. *To string onions*, take in your hand, three or four by the tails; tie them tightly with a new strand of matting, or a length of pack-thread; place on, two or three more onions; wrap the thread once or twice round their tails; place more onions, which also wrap hard, and so on, until the string is a yard or more in length. *To save the seed*, select some of the largest, well-housed, sound, firm bulbs, either in October, the beginning of November, or in February. Prepare a bed for them, and draw drills three or four inches deep, either a single row or two or three rows together, a foot asunder, in which plant the onions, six inches, ten inches, or a foot apart, and earth in about three inches. In planting double or treble rows, allow a space of two feet between each bed of two or three rows, to admit of a passage, both to place stakes and horizontal lines for the support of the seed-stems, and to cut down weeds. The plants will shoot up in stalks two or three feet high, producing each a large head of seed, which will ripen in August or September. The ripening of the seeds will be known by the husks assuming a brownish hue; the heads must be then immediately cut, otherwise the receptacles will open and shed their contents. Being spread on cloths in the sun, they become perfectly dry, when the seed may be rubbed out, cleaned of the chaff, and after remaining another day or two, finally stored. In sowing, it is of the utmost consequence to employ seed of not more than one year old, otherwise not more than one in fifty will vegetate. The goodness of the seed may be easily ascertained by forcing a small portion of it in a hotbed, or in warm water, a day before it is employed; when, if fertile, a small white point will soon protrude itself. *The size of onions is greatly improved* by simply taking the bulbs from the ground, preserving them during winter, and planting them again in the following spring at equal distances.

ONION RAGOUT.—Procure a pint of very young onions, together with four large ones; peel the whole of them, and cut them very small; put some good dripping or butter into a stewpan, and when melted, add the onions, and fry them a little brown; sprinkle with flour and shake them round till thick. Add a quarter of a pint of gravy, a little pepper and salt, and a teaspoonful of mustard; stir all together, and when tolerably thick, pour into a dish, and garnish with fried bread crumbs.

ONION SAUCE, BROWN.—Peel and slice some onions into a quart stewpan with an ounce of butter; set it over a slow fire and turn the onion about till it is very lightly browned; then gradually stir in half an ounce of flour; add a little brown gravy and a little pepper and salt, and boil up for a few minutes; strain it through a hair sieve, and serve it very hot.

ONION SAUCE, WHITE.—Peel six large white onions, cut them in half, and lay them in a pan of spring water for a quarter of an hour, then let them boil for a quarter of an hour, and if it is desired to have the sauce very mild pour off the first water, and cover the onions with fresh boiling water; let them boil till they are tender, drain them well in a hair sieve, lay them on a chopping-board, and chop and bruise them; put them into a clean saucepan with some butter and flour, half a teaspoonful of salt, and a little cream or milk; stir the mixture till it boils; then rub it through a sieve, adding cream or milk to bring it to the consistence desired.

ONION SOUP.—Brown half a pound of butter with a little flour in a stewpan, taking care that it does not burn; when it ceases hissing, put in twelve large onions sliced, and fry them very gently until tender; pour to them, by degrees, two quarts of boiling water, shaking the pan well round as it is being poured in; add a crust of bread; let it boil gently for half an hour, season it with pepper and salt; crisp the top of a French roll before the fire; put it into a saucepan with some of the soup to soak it, then turn it into the tureen; let the liquid boil for some time after the onions are tender, as it will impart a richer flavour to the soup; strain it off, pour it upon the French roll, and serve.

ONION VINEGAR.—Infuse an ounce of onions in a pint of vinegar for a fortnight, and strain it off, when it is ready for use.

ONIONS BOILED.—After peeling the requisite number of onions, let them lie for a couple of hours in cold water; then put them over the fire in a saucepan in cold milk and water, boil them till tender, and serve with melted butter poured over them.

ONIONS FRIED.—Peel the onions and cut them in slices; fry them in lard, butter, or the fat from the stock or other meat which is being cooked; continue stirring them while they are frying until they are of a deep brown colour.

ONIONS PICKLED.—*To pickle young onions,* select the small round sort; peel them, and steep them in strong salt and water for four days, changing the water two or three times; wipe them perfectly dry, put them into milk which is scalding hot, and let them lie until the milk becomes cold; then drain them and dry each separately in a cloth; alter which put them into jars; pour over them as much white wine vinegar which has been boiled with as much white pepper as will cover them completely; tie them over first with wet bladder and then with leather, and keep the jars in a dry place ready for use. Another method of pickling onions is to put them without peeling into cold water, and keep them on the

fire until the water boils; then take off the outer skins, and steep the onions in salt and water, previously to adding the vinegar. *To pickle Spanish onions,* proceed as follows:—Peel the onions, cut a small round piece out of the bottom, and scoop out a little of the inside; then lay them in salt and water for three days, changing them twice a day; then drain them and stuff them; first put in flour of mustard-seed, then some ginger cut small, together with a little mace and some shallot; then add more mustard, and fill up with some scraped horse-radish; replace the bottom piece, tie it on close; make a strong pickle of white vinegar, mace, ginger, nutmeg, sliced horse-radish, and a little salt; put in the onions, and let them boil up two or three times. In doing this, care must be taken that they do not boil too much, for they will then lose their firmness and will not keep; put them with the pickles into jars; on the following morning boil up the pickle again and pour over them.

ONIONS, PROPERTIES AND USES OF.—This vegetable may be considered either as a condiment, or as an article of absolute nourishment. In its raw state, especially, the onion, by virtue of the volatile oil which it contains, is a powerful stimulant, but one only to be used with impunity and advantage by persons who have strong stomachs. By boiling, the onion is deprived of much of its pungent property, and becomes an agreeable, mild, and nutritious vegetable. It is unwholesome either fried or roasted, a portion of the volatile oil being retained and rendered very irritating to the stomach. The onion possesses diuretic properties. A roasted onion cut in half and the centre scooped out, is a frequent domestic remedy applied to hoils to hasten their breaking.

ONIONS ROASTED.—Choose the largest onions for this purpose, and place them, with their skins on, in a slow oven, or in a Dutch oven before the fire. They require a very long time to cook. They are excellent alone with only salt and butter, or with roast potatoes.

ONIONS STEWED.—Strip the outer skins from four or five Spanish onions, and trim the ends, but without cutting into the vegetable; arrange them in a saucepan of sufficient size to contain them all in one layer; just cover them with good beef or veal gravy, and stew them very gently for a couple of hours; they should be tender all through, but should not be allowed to fall to pieces.

OPAL.—A precious stone of the quartz family. The value of the opal is regulated according to the amount of fire or lurid gleam which is seen reflected beneath its surface; those showing the most, being of the highest value, and those displaying the least, deteriorating accordingly; until when no fire at all is reflected, they become comparatively worthless.

OPERA GLASS.—In optics, an instrument so called from its use at operas, &c. The focus is adjusted by a screen fixed between the two tubes, which usually turns to the right to increase the distance, and to the left to decrease it.

OPHTHALMIA is an inflammatory action of the *adnata*, or white coat of the eye, in which the eyelids also very frequently participate. From the extreme delicacy of the organ, and the immense importance of vision to the comfort and happiness of life, no disease requires more immediate and careful attention than inflammation of the eyes. Ophthalmia usually commences with pain or oppression across the forehead, a dry, hot, and pricking sensation in the eye, giving the idea of dust or grains of sand between the lid and the ball. Upon examination, the white part of the organ appears marked with red lines, or bloodshot, with here and there dark purple spots, where the blood has been effused; the inside of the lids at the same time are extensively injected with blood, and swollen or puffy, especially the upper, which often overlaps and closes the eye; at the same time, from the pressure they exert, adding materially to the pain. The objection, or as it is called, intolerance to light that is experienced from the first, as the disease advances, becomes unbearable, and causes, if the light be injudiciously admitted, excessive discomfort and pain; concurrent with these symptoms, there is great heat, considerable pain in the eye, with great redness, and tenderness on the brow, cheek, and round the orbit. From the first, there is a constant exudation of tears, which, after some hours, assumes a more tenacious character, covering the ball with a film of stringy mucus, or what is called muco-purulent matter, completely obstructing all vision. As the day advances, all the symptoms become greatly aggravated, and at night have reached their intensity; the pain, heat, stiffness, throbbing, and intolerance of light being all greatly augmented. *Treatment.*—The first measures to adopt are, the insisting upon instant rest, seclusion and darkness; and if the patient is young and robust, he should be bled from the arm, to the extent of twelve ounces, performing the operation standing, and from a large opening, so as to produce sickness or fainting. The bleeding should be immediately followed by an active aperient, such as the subjoined powder, followed in two hours by a black draught, or half an ounce of Epsom salts in plenty of water. Take of

Compound jalap powder . . . 40 grains.
Scammony powder . . . 10 grains.
Calomel 6 grains.

Mix, and make a powder, to be taken in jelly, treacle, or some thick substance. Directly an action has been effected on the digestive organs, doses of the following mixture should be given every hour, to keep up a state of nausea, and subdue the action of the heart and arteries. Take of

Epsom salts 1 ounce.
Tartar emetic. 2 grains.
Camphor water 8 ounces.

Dissolve. Give two tablespoonfuls for the first dose, and one every hour afterwards, while awake. For the first day the eye or eyes should be frequently bathed with lukewarm water; and if at bed-time the pain is

very distressing, the patient should be given either 25 drops of laudanum, 10 grains of Dover's powder, or $1\frac{1}{2}$ grain of opium in a pill, to ensure sleep. If on the second day the symptoms continue unabated, the purgative powder is to be repeated, with the black draught or salts, the patient put into a hot bath for seven or ten minutes, a blister placed behind one or both ears, the nauseating mixture continued, and the eyes bathed every hour with the following lotion made slightly warm. Take of

Sugar of lead 30 grains.
Sulphate of zinc 20 grains.
Water, one pint, or . . . 20 ounces.

Dissolve, and make a lotion. When a shade is worn, it should be large, and made, by the interposition of two pieces of cork, to stand out from the forehead, so as to allow the heated air to pass off through the space thus left between the face and the shade. In conjunction with these remedies, the diet throughout must be of the simplest and least exciting kind, such as tea and toast, gruel, and barley water; and not till the inflammatory action has subsided must there be any return to solid food or animal indulgences. It is sometimes necessary, after severe ophthalmia, to keep the blisters open for a few days, and by the discharge created by these drains, divert the blood accumulated from the delicate and already injured organ of vision. On the whole, by keeping the patient in a darkened room, the employment of the means above described, and avoiding all excitement, most cases of ophthalmia may be brought to a successful termination.


When the inflammation, however, becomes chronic, or long standing, it is then necessary to stimulate the eye, either by cold astringent lotions, to produce a slight degree of smarting, or by dropping into the eye a few minims of the wine of opium every day.—See EYE.

OPIMUM.—The milky juice dried of the seed vessels of the common garden poppy. Opium is procured by making oblique incisions about half-way through the external wall of the unripe poppy capsule or seed vessel, and allowing the milky juice to become partially dry, when it assumes a brown colour and tenacious consistence; at this stage the opium is generally gathered, by scraping it off the capsule with a stick or some other instrument, by which it is transferred to the receiving vessel; it is then further dried, and formed into the masses in which it is sold. Opium, when bought as imported, is apt to contain much impurity; the best condition, therefore, is the properly prepared powder, which must be kept in a well-closed bottle. The soothing and sedative property of opium is well known, but it should be rarely resorted to, except under medical advice, and with great caution.—See LAUDANUM.

OPODELDOC.—Dissolve an ounce of camphor in a small quantity of spirits of wine; and also dissolve two ounces of soft soap in a little water; put these into a


hottle, add half a drachm of rosemary, and the same of oil of thyme; shake them well together; add three-quarters of a pint of spirits of wine and a quarter of a pint of water; set it in a warm place, and shake it occasionally, for a few days. This is an excellent remedy for bruises, sprains, &c.

ORANGEADE.—A pleasant summer beverage made as follows:—Steep the rinds of six China and two Seville oranges in a quart of boiling water for about six hours. Then make a syrup of three pints of water and a pound of sugar, and add it to the above with the juice of twelve China and two Seville oranges. Stir the whole well together, and pass it through a jelly-bag. Should further sweetness and flavour be desired, orange-flower water and capillaire may be added; and according to taste lemon-juice.


 Oranges, rinds of 6 China and 2 Seville, juice of 12 China and 2 Seville; water, 1 quart; *syrup*, water, 3 pints; sugar, 1lb.

ORANGE BISCUITS.—Boil whole Seville oranges in two or three waters till most of the bitterness is gone; cut them and take out the pulp and juice; then beat the outside very fine in a mortar, and put to it an equal weight of double refined sugar, beaten and sifted. Mix it into a smooth paste, spread them on dishes, and set them before the fire; when half dry, cut the paste into any form desired, turn the other side uppermost and dry that; then remove them from the fire, and keep them in a box with layers of paper.


ORANGE BRANDY.—Take the rinds of three lemons and of eight Seville oranges peeled very thin, and three pounds of sugar candy, pounded. Steep the whole in a gallon of brandy for four days and nights, stirring it frequently, and run it through filtering paper to clear it.

 Lemon-rinds, 3; Seville orange rinds, 8; sugar-candy, 3lb.; brandy, 1 gallon.

ORANGE BUTTER.—Boil six eggs hard, beat them in a mortar with two ounces of fine sugar, three ounces of butter, and two ounces of blanched almonds beaten to a paste. Moisten with orange-flower water; and when all is mixed, rub it through a colander on a dish, and serve with sweet biscuits between.


 Eggs, 6; sugar, 2ozs.; butter, 3ozs.; almonds, 2ozs.; orange-flower water, sufficient.

ORANGE CHEESECAKES.—Beat half a pound of blanched almonds to a fine paste, with orange-flower water; add half a pound of refined sugar and a pound of butter, which must be carefully melted without oiling, and allowed to become cold before using it; then beat the yolks of ten eggs, and the whites of four; pound two candied oranges and a fresh one, with the bitterness boiled out, in a mortar till as tender as marmalade; beat the whole together, and put into pattypans lined with puff paste.

 Almonds, ½lb.; orange-flower water, sufficient; sugar, ½lb.; butter, 1lb.; eggs, 10 yolks, 4 whites; oranges, 2 candied, 1 fresh; puff paste, sufficient,

ORANGE COMPOTE.—Let oranges to the number required, lie in water for four hours; then boil them until tender, cut them in halves, and take out all the insides; to every pound of peel well pounded, add a pound of sugar; then remove all the skins and seeds from the pulp, add its weight of sugar, and heat it well; then mix it with the peel, and heat it again in a mortar, and put it for use. In a cool and dry place, this compote will keep good for several years.


ORANGE CREAM.—Boil the rind of a Seville orange very tender, heat it fine in a mortar; put to it a tablespoonful of the best brandy, the juice of a Seville orange, a quarter of a pound of loaf sugar, the yolks of four eggs; heat all together for ten minutes; then, by gentle degrees, pour in a pint of boiling cream or good milk, beat till cold, put into custard cups, set into a deep dish of boiling water, and let them stand till they become cold. Place at the top small strips of orange-peel, cut thin, or preserved chips.

 Orange, 1; brandy, 1 tablespoonful; sugar, ½lb.; eggs, 4 yolks; cream or milk, 1 pint; orange-peel strips, or preserved chips, sufficient.


ORANGE, CULTURE OF.—The methods adopted for cultivating the orange, apply equally to the citron, lemon, lime, shaddock, &c. All kinds will propagate freely by cutting, either of the young shoots, or of that riper in character. They are prepared in the usual way, and inserted in pots of sand; a close frame with a bottom heat of seventy-five degrees is necessary, and they must be plunged. *Layers* root with facility, but do not make such fine plants. *Grafting* is performed in various ways, dependent much on the size and character of the stock. Sometimes the young seedlings are grafted which were sown in early spring; these, by bottom heat and high culture, are rendered fit for this operation in four or five months. Other cultivators cut off the head of the stock, and crown-graft; others attach the graft to the growing shoot, as in ordinary whip-grafting. *When the trees are imported*, the following is the best mode of culture: Prepare a moderate hot-bed of tanner's bark, in length and breadth according to the number of trees to be forced; then put the trees upright in a tub of water, to about half the depth of the stem, leaving the head and the upper part of the stem out of water, the better to draw up and imbibe the moisture. In this situation they may remain for two or three days, according to their condition when received; then take them out and clean them well from dirt and other matters adhering to them, cutting off all broken or bruised roots, and all the small fibres which have become quite dried by being so long out of the earth, and scrub the stems with a hard hair-brush, cleaning them afterwards with a cloth; then cut off the branches about six inches from the stem, and having prepared a quantity of good fresh earth, mixed with cow-droppings, set the plants therein, observing that the pots are not too large; if they are just large enough to contain the roots, that will be sufficient at first planting.

Wrap the stems round with hay-bands from bottom to top, to prevent the sun from drying their bark; plunge the pots into the bark-bed, watering well to settle the earth to their roots, and shading them from the mid-day sun. Under favourable circumstances, they will have made strong shoots by the beginning of June; at which time, stop them to obtain lateral branches to furnish their heads, harden them to admit their removal into the open ground in July; house them about the end of September, and during winter water frequently, but moderately, guarding at the same time against frost. In the following spring, clean the stems and leaves of the plant, top-dress the earth, and enrich with rotten manure round the edges of the pots, taking care that it does not touch the stems of the plants. Remove to a sheltered situation in the open air by the end of May. As the trees advance, stop strong irregular shoots in the summer season, to force out lateral branches to fill the head, and render it regular in its growth, and free from weakness. The trees will require to be shifted and fresh potted every other year, in the month of April. In performing this operation, having drawn the trees out of the pots, cut off all the roots round the outside of the ball of earth, and take away all mouldy roots; then set the root of the tree into a large tub of water for about a quarter of an hour, then re-pot the trees and water them, letting them remain in the house till they have taken root. The orange-tree, kept in conservatories, generally requires fifteen months to ripen its fruit. In England they often remain three years in moderately strong plants without fruit. *In gathering for the table in this country, the fruit should not be pulled with the hand, but carefully cut, with a few leaves attached, and, thus garnished, sent to the dessert. By allowing them to hang for two years, the trees will at all times have green and yellow fruit, which, in connection with their shining green leaves and fragrant blossoms, will form early in spring one of the most pleasing and picturesque of horticultural scenes.*

ORANGE CUSTARD.—Strain the juice of twenty oranges, and sweeten it with pounded loaf sugar; stir it over the fire till hot; then remove it, and when nearly cold, add the yolks of twenty eggs, well beaten, a quart of cream or good milk, and a wineglassful of ratafia; put the whole into a saucepan, and stir it over a slow fire until it thickens; then pour it into cups or glasses, and serve when cool.


 Oranges, juice of 20; sugar, to sweeten; eggs, 20 yolks; cream or milk, 1 quart; ratafia, 1 wineglassful.

ORANGE ESSENCE.—Put into a stewpan six ounces of ham, a little nutmeg, a small bunch of sweet herbs, half the peel of an orange, a pint of plain veal jelly, and a pint and a half of consommé; reduce these one-half, and then add the juice of an orange, and strain the whole through a sieve. This essence is excellent with wild ducks and other wild fowl.


 Ham, 6ozs.; nutmeg, to season;

herbs, a small bunch; orange-peel, $\frac{1}{4}$ of 1; veal jelly, 1 pint; consommé, $\frac{1}{4}$ pint; orange, juice of 1.

ORANGE-FLOWER BISCUITS.—Beat up eight eggs, and work them in with a pound of powdered loaf sugar, and a pound of flour finely sifted; put to this enough orange-flower water to impart a flavour; then add as much spring water as may be necessary to make the whole into a fine paste; dredge sugar on the top, and bake in square paper moulds: at the end of a quarter of an hour take the biscuits out of the oven, and powder them again with sugar.

 Eggs, 8; sugar, 1lb.; flour, 1lb.; orange-flower water, to flavour; water, sufficient.

ORANGE-FLOWER CAKE.—Form a mould of writing-paper, folded and plaited round in the shape of a dripping-pan, the edge being made about two inches deep. Put two pounds of loaf sugar into a stewpan with a pint of water, and boil to a strong syrup as for marmalade; then put in half a pound of orange-flower leaves, and boil them till the sugar begins to crystallize, stirring quickly all the time with a wooden spoon. Have ready a little fine sugar, beaten up with the white of egg; put this into the sugar, stir it well together, and pour the mass into the paper mould.

 Sugar, 2lb.; water, 1 pint; orange-flower leaves, $\frac{1}{2}$ lb.; sugar, with white of egg, sufficient.

ORANGE-FLOWER WATER.—An essence made by the distillation of orange flowers. As these are neither sufficiently abundant in England, nor of the requisite richness for distillation, a very good substitute may be made by mixing a drachm of neroli with two ounces of spirits of wine, and adding a pint of filtered water. Orange-flower water is sometimes used as a cosmetic, but more frequently for flavouring creams, ices, and other articles of confectionery and pastry for the table.

ORANGE FRITTERS.—Select some fine large oranges, and cut them into slices; dip them into butter, fry them a pale brown, and let them be very dry. Serve them heaped high upon a folded napkin, with sugar strewn over them.

ORANGE JELLY.—Strain the juice from two dozen China oranges over the grated rind of one, and add the juice of four Seville oranges. Run the juice through a jelly-bag, and add sugar in the proportion of one pound to a pint of juice. Set it over the fire, and let it boil for twenty minutes; then boil a quarter of a pound of isinglass in half a pint of water, with the rind of a lemon, till the isinglass is dissolved; add a spoonful of this at a time to the juice as it boils, until the mixture is perceived to stiffen; then pour it into pots, which cover securely, and put by in a dry cool place.


ORANGE MARMALADE.—This preserve should be made at the end of March or the beginning of April, as Seville oranges are then in their best condition. Marmalade may be made in a variety of ways. The following is a selection of the choicest

receipts: *Ordinary marmalade*.—Choose the largest Seville oranges, as they usually contain the greatest quantity of juice; select those with clear skins. Weigh the oranges, and weigh also an equal quantity of loaf sugar. Skin the oranges, dividing the skins into quarters, and put them into a preserving-pan; cover them well with water, and set them on the fire to boil; in the meantime, prepare the oranges; divide them into gores, then with a teaspoon scrape away all the pulp from the white skin; or, instead of skinning the oranges, cut a hole in them, and scoop out the pulp; remove all the pips. Have a large basin at hand, with some cold water in it, in which to throw the pips and skin—a pint is sufficient for a dozen oranges. Boil these in the water, and strain the glutinous matter which comes from them to the other parts. When the skins have boiled till they are sufficiently tender to admit of a fork piercing them easily, scrape away all the pith from the inside of them, lay them in folds, and cut them into thin slices of about an inch in length. Clarify the sugar, then throw the skins and pulp into it, stir the whole well, and let it boil for half an hour; then remove it from the fire, and when it becomes cool, put by in pots. *Scotch marmalade*.—Take some bitter oranges, and double their weight of sugar; cut the rind of the fruit into quarters and peel it off, and if the marmalade be not wanted very thick, take off some of the spongy white skin inside the rind. Cut the chips as thin as possible, and about half an inch long; divide the pulp into small portions, removing carefully the pips, which may be steeped in part of the water used for making the marmalade, and which must be in the proportion of a quart to a pound of fruit. Put the chips and the pulp into a deep earthen dish, and pour the water boiling over them; let them remain for twelve or fourteen hours, and then turn the whole into the preserving pan, and boil it until the chips are perfectly tender. When they are so, add by degrees the sugar (which should be previously pounded), and boil it until the whole of it becomes a jelly. The water in which the seeds have been steeped, and which must be taken from the quantity apportioned to the whole of the preserve, should be poured into a hair sieve, and the seeds well worked in it with the back of a spoon; a strong clear jelly will be obtained by this means, which must be washed off them by pouring their own liquor through the sieve in small portions over them. *Marmalade for puddings*.—Boil twelve Seville oranges till they are quite tender, changing the water two or three times; take out the seeds, pulp, and inner skin of the rind; beat the outer rind in a mortar to a fine paste, add to it the pulp and juice; to every pound of this, add two pounds of fine moist sugar; mix the whole well together; put it into a larger jar than will hold it, to admit of fermentation. It will thus keep for years, and ready to be used for puddings when other materials are scarce. *Mince marmalade*.—Prepare the oranges as in the foregoing receipts, and

take an equal weight of powdered sugar; when the skins are perfectly tender, put them on a mincing board, and chop them very fine; strew the mince, pulp, sugar, and juice into the preserving pan, and boil the whole for three minutes exactly. Put into pots when cool. *Transparent marmalade*.—Select very pale Seville oranges, cut them into quarters, take out the pulp and put it into a basin, pick the skins and seeds out, put the peels into a little salt and water, let them stand all night, then boil them in a good quantity of spring water till they are tender; cut them into very thin slices, and add them to the pulp. To every pound of marmalade put a pound and a half of double refined sugar beaten fine. Boil gently for twenty minutes; if it is not then clear and transparent, boil it for five or six minutes longer, keep stirring it all the time, and take care that the slices are not broken; when it is cold, put it into jelly or sweetmeat glasses, and tie them down with brandy papers over them. This form of marmalade is the most inviting to sick and delicate persons; and it is also well adapted for serving with the dessert.

ORANGE-PEEL, CANDIED.—Cut oranges lengthwise, remove all the pulp and inside skin, and put the peel into strong salt and water, in which allow it to remain for five or six days; then take out the peels, and boil them in spring water until they are soft, and afterwards place them in a sieve to drain; make a thin syrup with a pound of sugar-candy to a quart of water, boil the peels in this for half an hour, or until they appear clear; make a thick syrup with sugar and as much water as will melt it; put in the peels, and boil them over a slow fire until the syrup candies in the pan; then take them out, strew powdered sugar thickly over them, and dry them before the fire or in a cool oven. Set them by in a jar, closely pressed down and securely tied.

ORANGE POSSET.—Grate finely the crumb of a penny loaf, and put it to a pint of water with the peel of half a Seville orange grated. Boil all together till the mixture appears thick and clear; then take the juice of half a Seville orange, three ounces of sweet almonds, and one ounce of bitter; beat the whole up well with a tablespoonful of brandy; add sugar to taste and a pint of white wine; mix well, and add the posset, and serve.

 Bread, penny loaf; water, 1 pint: orange, peel of $\frac{1}{2}$, and juice of $\frac{1}{2}$; almonds, sweet, 3ozs.; almonds, bitter, 1oz.; brandy, 1 tablespoonful; sugar, to taste; white wine, 1 pint.

ORANGE, PROPERTIES AND USES OF.—This fruit is, generally speaking, a wholesome and refreshing one; but with some persons it is apt to disagree, and in such cases the juice only should be taken without any of the pulp; and where oranges cause a considerable degree of flatulency, they should never be eaten in an uncooked state. The juice of the orange is very refreshing, especially in cases of fever and other inflammatory complaints, and in such cases it may either be taken in its pure state or mixed

with water. Orange-peel, in addition to the variety of culinary purposes to which it is put, possesses medicinal properties; when dried and infused, it acts as a stimulant, stomachic, and tonic; and small pieces of the dried rind simply chewed at intervals, will have a similar effect.

ORANGE PUDDING.—Scald and dry four fine oranges, then grate off the outer rind, mix half of which with two ounces of flour, and rub in the same quantity of dripping, making the whole into a thin batter, with one egg and a teacupful of new milk; slice the oranges, having well stripped off the white skins; lay them in the bottom of a small baking dish; strew over each layer a tablespoonful of pounded sugar and a portion of the grated peel, till your oranges are all used; pour the batter over them, and bake in rather a slow oven from half to three-quarters of an hour.

Oranges, 4; flour, 2ozs.; dripping, 2ozs.; egg, 1; milk, 1 teacupful; sugar, sufficient.

ORANGE PUNCH.—Dissolve three-quarters of a pound of sugar in a little water, add the juice of two lemons, and pour two quarts of boiling water upon it; then add a glass of calf's-foot jelly; mix together a bottle of brandy, a bottle of rum, and a bottle of orange wine; add to it the juice just made, and serve it either hot or cold. If bottled and placed in a cool cellar, it will keep for any length of time. When desired, the flavour may be heightened by the addition of a little curaçon or maraschino.

Sugar, $\frac{3}{4}$ lb.; water, sufficient; lemons, juice of 2; boiling water, 2 quarts; calf's-foot jelly, 1 glassful; brandy, rum, orange wine, 1 bottle each.

ORANGE RATAFIA.—Put nine oranges in their natural state into two quarts of brandy, with some cinnamon and coriander seed; let them infuse for two months, then strain off the liquor and bottle it.

ORANGE SYRUP.—Select the largest, deepest coloured, and roughest oranges that can be obtained; grate off the rind, and throw the fruit into water; let them remain in this for twelve hours, then put them into a cloth and boil them; when tender, cut them into quarters, and, after taking out the pulp, throw them into cold water; make a thin syrup, clear the fruit in it; after which enrich the syrup, adding the pulp; make it very thick, and pour it over the oranges; put into jars.

ORANGE TART.—Press, pulp, and boil till tender, two Seville oranges; add twice their weight of sugar, and beat both together to a paste; then add the juice and pulp of the fruit, together with a piece of fresh butter of the size of a walnut; beat all well together; line a very shallow dish with a light puff paste, and lay the orange mixture into it. Bake in a moderate oven.

ORANGE WINE.—For ten gallons, take a hundred Seville oranges, peel them very thin; press out the juice, and put it with thirty pounds of loaf sugar into a cask; place the peels into a deep pan, large enough

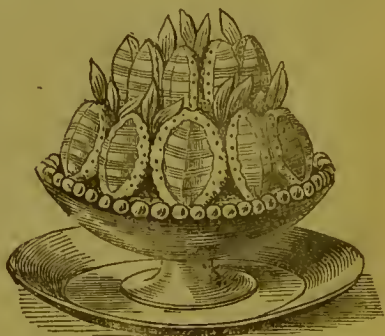
to allow of a gallon of cold water being poured over them; this done, let it stand till the next day, then pour the water over the sugar and juice which are already in the cask; cover the peel again with water, adding it to the contents of the cask on the following day, and continue to do this until the cask becomes full. Stir the mixture well every day for two or three weeks, by which time it will be in full fermentation, and will continue so for many months; after this draw the liquor off, and after removing the lees, and cleaning out the cask with a dry cloth, dissolve half an ounce of isinglass in a little of the wine; stir this well in, and bung the cask closely until the autumn. It may then be bottled.

Seville oranges, 100; sugar, 30lbs.; water, sufficient; isinglass, $\frac{1}{2}$ oz.

ORANGES CANDIED.—Peel the number of oranges required, removing as much as possible of the white part; divide the fruit, and boil it in strong syrup for half an hour; let it stand till cold, and repeat the operation of boiling three or four times, until the syrup has become exceedingly thick; then take out the oranges, powder them with fine sugar, and put them in a cool oven to dry.

ORANGES IN BRANDY.—Blanch the oranges for a few minutes to cause them to swell, then put them into cold water; drain them, and pour over them some clarified sugar, and let them stand for some hours; then boil them again in the syrup, and let them stand until they are cold; repeat this three or four times, after which put the oranges into wide-mouthed bottles, with brandy sufficient to cover them; cork the bottles securely down, and set them by in a dry cool place. This will be found a very elegant addition to dessert in the winter season.

ORANGES WITH JELLY.—An elegant and fanciful dish for the supper table or the dessert, prepared as follows:—Take some very fine China oranges, and with the point of a small knife cut out from the top of each



a round piece about the size of a shilling; then with the small end of a teaspoon or eggspoon separate the fruit from the rind, taking care not to break the latter. Throw the rinds into cold water, and make jelly of

the juice, which must be well pressed from the pulp, and strained as clean as possible. Colour one half a flue rose colour with prepared cochineal, and leave the other half very pale; when the juice is nearly cold, drain and wipe the rinds, and fill them with alternate stripes of the two jellies; when they are perfectly cold, cut them into quarters, and dispose them tastefully in a dish with a few light branches of myrtle between, somewhat after the manner of the accompanying engraving. Calf's feet, or any other variety of jelly, or different blanc-manges may be used at choice to fill the rinds.

ORCHARD.—A plantation devoted to the hardier fruit trees. It is a common appendage to the kitchen-garden when that department is small, or does not contain an adequate number of fruit trees to supply the contemplated demand of the family. Sometimes the orchard adjoins the garden, and forms a part of the slip; at other times, it forms a detached, and perhaps distinct enclosure. Sometimes the same object is effected by mixing fruit trees in the plantations near the garden and house. *The form of the orchard is a matter of very little consequence. The size will be regulated by the quantity of produce desired. The arrangement is very simple, being almost always quincunx, the distances between the plants being greater or less according to the sorts made choice of. With respect to situation and aspect, a very low damp situation should be avoided as much as the nature of the locality will admit; for in very wet soils no fruit trees will prosper nor the fruit be fine; but a moderately low situation, free from copious wet, may be more eligible than elevated ground, as being less exposed to tempestuous winds; though a situation having a gentle declivity is very desirable, especially if its aspect inclines towards the east, south-east, or south, all of which are preferable to a westerly aspect; but a north aspect is the worst of all for an orchard, unless particularly compensated by the peculiar temperament or good quality of the soil. Any soil will do for an orchard which produces good crops of corn, grass, or garden vegetables; a loamy soil is to be preferred, though any of a good quality, neither too light and dry, nor wet, heavy, and stubborn, but of a moderately soft and pliant nature, will be found to answer the end. Shingly and gravelly soils disagree very much with fruit trees, unless there be loam intermixed. They will succeed much better on a chalk bottom. The trees will not, however, thrive long, even in the best soil, if stagnant water rest in the subsoil; therefore, it is necessary, in the first place, to dig test-holes, to the depth of four feet at least; and if water stand in them, drains must be formed so as to carry off such subsoil water, and likewise, if possible, intercept its source. The sorts of fruits best adapted for orchards are apple, pear, plum, cherry, quince, medlar, mulberry, service trees, filberts, and berries, as also walnuts and chestnuts; the latter two trees being well adapted for sheltering the others from high winds, and*

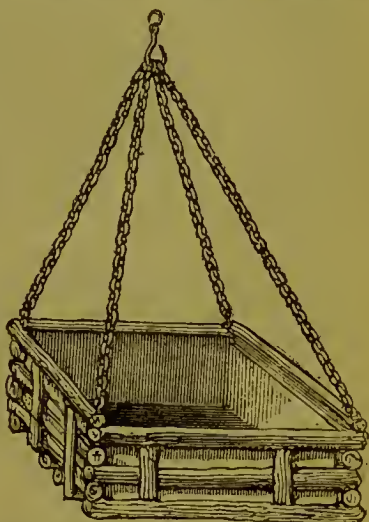
should therefore be planted in the boundaries of the orchard, a little closer than ordinary for that purpose. *The sorts of plants made choice of are invariably standards and half-standards, and commonly such as are not more than one or two years from the graft. The distances at which the trees should be planted from each other is from thirty to forty feet, more or less, according to the quality of the soil, taking as a medium thirty-six feet. In a poor soil and a bleak exposure, where the trees may not be expected to grow very freely, thirty feet are sufficient; whereas in good soil and a sheltered situation, forty feet may not be too much. But it would be advisable, in the first instance, to plant four trees for one that is intended ultimately to remain, planting the proper kinds at the above distances first, and then temporary plants between them each way, which temporary plants should be of the free-growing sorts, which begin to produce fruit soon after planting; these must give place to the principal trees as they advance in growth, by being gradually pruned away, and at last stubbed up entirely. If orchard trees be planted among shrubbery, &c., they may be placed at any distance, exceeding forty feet, that may be thought proper; but they should not be planted nearer, otherwise they will confine the shrubs too closely. In this case it will not be necessary to plant temporary trees, as the principals will be nursed by the shrubs. In bleak situations, if forest and other hardy trees be planted among the fruit trees, it may not be necessary to plant so many, or even any, temporary fruit trees; or these may chiefly consist of the hardier sorts, which produce fruit the soonest. When the trees are planted, they should be properly staked and protected. A firm stake should be set to each high standard, newly planted, twist a part of a hayband round the tree to prevent it from falling, and with the remainder tie it securely to the stake. If the orchard be not completely fenced, every care should be taken to guard the plants from hares, by properly bushing them round with thorns. In order to keep the plants moist and healthy, a small basin or hollow should be made round the stem of each tree, a foot or a foot and a half in diameter, and two or three inches deep, according to the extent of the roots. Fill this basin with littery dung, to the depth of five or six inches, over which sprinkle a little earth, just enough to keep it from being blown about. This both nourishes the young fibres, and keeps the ground about them moist in hot weather, if wetted once a week. To protect the roots of autumn-planted trees from the frost of the succeeding winter, and from drought in the summer, lay mould about the stem to the distance of two feet round and six inches in thickness; or substitute a thin layer of turf in summer. If the spring which succeeds planting prove dry, dig up some turf and lay it round the stems of young trees with the grassy side downwards; this will keep the ground moist and save a great deal of watering: if the trees have taken well, this need not be repeated,*

as they will be out of danger after the first year. The turf should be laid as far as the roots of the trees extend; and when it is rotted, it should be forked in, and will be of great service to the trees. Clothing the stems of standard trees by an envelope of moss, or short grass, or litter wound round with shreds of matting, is of great service the first year after planting, to keep the bark moist, and thereby aid the ascent and circulation of the sap. This operation should be performed at or soon after planting, and the clothing may be left on till it decay it drops off of itself. Newly planted orchards must be attended to in respect to watering, which should be repeated, the oftener as the season advances, till the trees strike into the soil. If planting is performed early in the autumn, while the weather is yet hot and dry, a little water may be given to assist the roots to strike; but they ought not to be soaked with water, nor need watering be repeated. At planting late in spring, should the ground be dry, give a moderate watering; which, repeat about once a fortnight during the hot months. Supposing the plantation to have been made in winter, should a dry spring follow, a few waterings may be necessary until the plants strike. *The best season for planting an orchard is the autumn, as soon as the trees have ripened their wood and dropped their leaves.* When autumn planting is impracticable, the next best season is the beginning of February, or as early as circumstances will admit.

ORCHID.—A perennial herbaceous plant, of which there exists an extensive and beautiful family, conspicuous, however, for ornament rather than use. The habits of these singular plants vary exceedingly, and to attempt to follow nature in their culture would require three distinct structures. Generally speaking, the grouping of those together which will bear a uniform treat-

ment, will be ordinarily successful. The majority will prosper under ordinary stove treatment, enjoying a free ventilation; and some will succeed very well in a warm greenhouse. One important feature in the culture of these plants is the use of peaty materials, when for orchids which most affect the air—they must be built high above the pot

level: they can scarcely be too high. The atmosphere thus more easily penetrates the vegetable mass, and it is consequently always in a mellow and pervious condition. Thus managed, three-fourths of the orchids will take to the fibrous peat, and will then be in a position to require less nursing. A considerable number of species are grown in baskets, because the flower-stems are pendent, and, consequently, naturally require a position to allow the flowers to grow down. Indeed, some send the flower-stems perpendicularly down through the soil or compost. If these are grown in pots, the flower-stems wind down into the soil, and there perish. By growing them in baskets, this evil is prevented, and every cluster of flowers arrives at perfection. The baskets should be of dimensions suitable to the size of the plants



—small ones requiring only small baskets, middling ones the middle size, and large ones in proportion. The best way to basket the plants is as follows:—Have the peat or compost prepared; cover the bottom of the basket with a thin layer of moss; which will prevent the peat from dropping through the openings between the rods forming the bottom. Then place a portion of peat upon the moss. In the next place, prepare the plant, by taking it out of the old basket or pot; and do this very carefully, without injuring the roots. Examine the bulbs and leaves, and free them thoroughly from dust and insects. Prune away all dead roots, and then the plant will be in a fit state for removal. Place it in the middle of the basket, and fill in all round it with the new compost. Set the basket on the floor, and, with the syringe held pretty close to the peat, give it a liberal watering, forcing the water out of the syringe rather strongly; this will make the compost firm, so that future waterings will not wash it off the basket on to the floor or plants beneath. Various materials and forms have been used



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for the baskets. Common Iron wire should not be adopted; copper wire is much better. Earthenware is sometimes used, but the great weight is objectionable. The best baskets are those made of wooden rods; rough-barked maple or hazel rods will be found the most suitable for this purpose. The way to make these baskets is simple enough. First, the rods are sawn into proper lengths, and the ends pared smooth with a knife; then small holes are bored through each, one at either end. After a certain number of rods are cut and pared, they are taken to a small, red, clear fire; and the sharp end of one of the instruments used for boring the holes is put into it about one inch. As soon as that is red hot, another is put in, the heated one drawn out and thrust into the rod very near the end, and held there as long as it continues to burn its way without much pressure. If too much force is used, the wood will be apt to split. As soon, therefore, as the instrument ceases to burn its way through, it is replaced in the fire, and the other, which will be by this time red hot, is employed in the same manner; the operation is thus performed till the hole is burned completely through. After as many rods are bored as may be wanted at one time, they must then be put together; the articles necessary for this are some copper wire and a few flat-headed copper nails. Each basket will require four lengths of wire, in proportion to the size of the basket they are intended for. They should be long enough to meet at least eight inches closer the top of the smaller-sized baskets, and from a foot to eighteen inches above the larger ones. At the end of each piece of wire, a loop should be made sufficiently large to draw through the holes; then lay the first two rods, and upon them, for the smallest basket, lay three others; nail these three to the two outside rods, turn this over, and underneath it put two other rods, to form the other two sides of the basket; then draw the four pieces of wire through the holes at each corner, the looped end being underneath. Continue to lay a pair of rods alternately, drawing the wire through each, till the basket is of the required depth. The smallest size, three rods deep; the two next four deep, and so on. When that is done make four small pointed pegs, and drive them into each hole at the four corners. This will fasten the rods in their places, and prevent them from starting upwards; then draw the wires together at the top, twisting each pair one over the other, and fasten them with a piece of fine wire. The basket will then be complete and ready for use.

ORGEAT.—A beverage procured from almonds, and thus prepared:—Take a pound and a quarter of bitter almonds, and half a pound of sweet almonds, which have been previously blanched; nine pounds of loaf sugar, six pints of water, and the rinds of three lemons; pound the almonds in a mortar with the sugar, and add the water by degrees; then put the mixture on the fire with the lemon-peel: after one boil, pour off the syrup and press the almonds, to extract

the milk; add this to the syrup, and strain the whole through a fine sieve; when cold, stir in six drops of neroli, and bottle the mixture. The orgeat is used mixed with cold water according to taste.

Almonds, bitter, 1½lb.; almonds, sweet, 3lb.; sugar, 9lb.; water, 6 pints; lemons, 3 rinds; neroli, 6 drops.

ORNAMENT, HOUSE.—The decoration of the interior of a house adds materially to its pleasantness, and if carried out with taste, cannot fail to possess a charm even to the most indifferent. This does not depend upon the abundance or costliness of the ornaments chosen, so much as their suitability or arrangement. In fact, an apartment crowded with ornaments without any use or meaning, savours of vulgarity, and may be interpreted as a wish to astound the beholder instead of pleasing or interesting him. Therefore, the tables, mantelpiece, &c., instead of being overloaded with a confused crowd of shells, statuettes, wax flowers, artificial fruit, porcelain jars, and glass lustres, should be sparingly decorated with a selection of the above-named objects, gracefully grouped. Prints, paintings, and drawings are subject to the same rule, namely, excellence rather than profusion. A recent article of ornamentation has been carried to a somewhat ludicrous extent in crochet-work; and apartments sometimes appear positively forbidding, by reason of the crochet anti-macassars, crochet cushions, crochet mats, &c., and various other objects after the same device. With regard to ornamentation generally, it is best regulated by its obvious purpose, which is to relieve the eye, not offend it.—See DRAWING-ROOM, FURNITURE, &c.

ORNAMENT, PERSONAL.—The employment of ornaments for the person should be in a very slight degree, no person having any pretensions to the rank of lady or gentleman wearing a profusion of them. Any offence against this rule is an evidence not only of the bad taste, but the mental inferiority of the wearer. One simple rule affords a safe standard of personal decoration: those who possess personal advantages need no adventitious display to enhance them, whilst those who are cast in an ordinary mould, render their personal appearance more ordinary still, by the very contrast between the ornaments and the wearer. Age has also something to do with the matter, it is sometimes excusable for the young to have recourse to ornamentation; but when persons of mature years decorate themselves to excess, it is a truly pitiable sight. Whatever the articles, therefore, whether jewels, chains, flowers, ribbons, or embroidery, they should only be made available in a slight degree, and rendered subservient to the general attire rather than independent of it.—See APPAREL, JEWELLERY, &c.

ORPHAN ASYLUMS.—There are a number of these charitable institutions established in various parts of England, the chief of which are in and near the metropolis, and known as the London Orphan Asylum, The Infant Orphan Asylum, The

British Orphan Asylum, The Orphan Working School, and various others. Admission into these schools is ordinarily obtained by votes, a list of the subscribers who are entitled to vote being printed and published, and is to be had at the several offices connected with the school. The objects of such institutions are to feed, clothe, and educate children who have lost one parent or both, until they arrive at the age of fourteen or fifteen, when the governors of the school succeed in placing them in some situation where they will continue to have their wants supplied to them until such time as they are able to provide for themselves. It will thus be seen that when a child enters a school of this description, he is at once provided for for life; and if he exercises common industry and energy, and is upright and moral in his conduct, he will not only succeed in attaining to an excellent social position, but in many cases achieve even an independence.

ORRIS ROOT.—A plant, native of Italy, and now generally reared by florists as an ornament in the garden. The orris root sold in shops is imported from Leghorn. The root in its recent state is entirely acrid; and when chewed excites a pungent heat in the mouth, which continues several hours. On drying, this acrimony is almost wholly lost, the taste is slightly bitter, and the smell agreeable, resembling violets. Orris root is frequently used for the purpose of disguising unpleasant breath, but as the effect is only partial, and the odour occasioned is apt to awaken suspicion, this employment of the root is very questionable.

OSIER.—A native plant of most parts of Europe, and growing spontaneously in fenby places. When allowed, it becomes a small tree, but is generally cut down for basket work. The osier grows very rapidly, and is used only for the coarser basket-work, unless when split into pieces. On the banks of large rivers, osier beds may be planted with great advantage; and the osier will also thrive in dry situations, if the soil be good. Cuttings of osiers take root very readily, and it is not of much consequence which end of them be put into the ground. They are of great use in giving consistency to banks and embankments, which are in danger of being washed away.

OSSIFICATION.—This word literally means the formation of bone, or the process by which what is cartilage in very young infants is gradually solidified, and changed from a state of flexible gristle into compact, rigid bone; all bone in its normal state being cartilage. Ossification is also a term employed in surgery to denote a diseased action that has taken place in certain tissues, by the deposition of bony layers, where naturally no such deposit should take place. The parts where this unnatural change takes place are very different; sometimes it is in the soft yielding texture of the arteries, and chiefly in the great artery—the aorta—where it rises from the heart; at others, in the stomach, either at its opening from the throat or the lower opening into the small

intestines, and sometimes in the valves of the heart. Ossification is a disease of whose existence we can only surmise, having no knowledge of it but by its effect, and that is generally a fatal one, leading to aneurism and sudden death; as from the brittle state the part ossified assumes, it is rendered, upon any sudden exertion, very liable to break, when, if in the heart or large artery, the sudden effusion of blood destroys life immediately.

OSTRICH FEATHERS, TO CLEAN.—Cut four ounces of white soap into small pieces and dissolve them in four pints of water, rather hot, in a large basin; make the solution into a lather by beating it with birch rods or wires. Immerse the feathers, and rub them well with the hands for five or six minutes. Then rub any stained parts with a piece of cap-paper, shake them, wipe them gently with a cloth, and set them to dry.

OTTER.—An aquatic quadruped, which is able to swim and dive with great readiness, and with peculiar grace and ease of movement. This animal is a great enemy to fish, and the depredations it frequently makes are such as to render the destruction of the animal necessary; to accomplish this, proceed as follows:—Go along the stream; look for the deepest holes, where the fish are sure to fly when pursued. Look about narrowly and you will see the tracks where the otter comes out of the water up the bank; and often you will find a small tuft of grass greener than the rest; open this and you will find the dung of the otter, full of scales and bones of fish. Having found out a favourite landing-place of the otter, make a run, slanting from the water up the bank, with a trapping-paddle; dig out a place exactly the form of the trap; set the trap slanting, so that the otter should not tread on the spring; cover it over with fine mould level with the ground. When done, go back as far as you can, and with your hand throw water on the place where the trap is set and all around, to take away the scent of your hand and the fresh mould. Have a chain to the trap three yards long, fastened to the bank by a strong peg, which chain you must also cover. Your trap should be larger and stronger than the usual rabbit trap. When you find you have caught an otter, draw up your chain out of the water, and on seeing the otter's nose appear above the surface, give him a blow across the nose with a stick, which will despatch him. The otter may be domesticated, though, from its ferocious disposition, this is a task of much difficulty. In order to do it effectually, so that the animal may catch fish, or assist in fishing, they should be procured as young as possible, and be first fed with small fish and water. Then bread and milk is to be alternated with the fish, and the proportion of the former gradually increased till they are led to live entirely on bread and milk. They are then taught to fetch and carry, as dogs are trained, and when they are brought to do this well, a leathern fish stuffed with wool is employed as the object to be fetched; they are afterwards exercised with a dead fish,

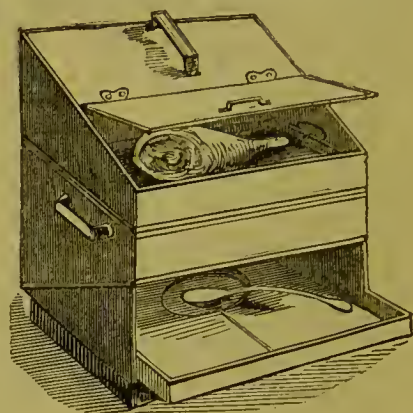
and chastised if they attempt to tear or mangle it. Finally, they are sent into the water after living fish. Otters generally bring forth their young under hollow banks or a bed of rushes, flags, or such weeds as the place affords in greatest quantities.

OUTFIT.—A term used collectively to denote the supply of wearing apparel, domestic utensils, culinary apparatus, and other essentials for persons proceeding on a long voyage. When a person contemplates taking this step, and is not acquainted with the precise quality and number of articles that he should take with him, his best plan is to place himself in the hands of a respectable outfitter, who will supply him with everything requisite, without burdening him with articles that are not necessary.

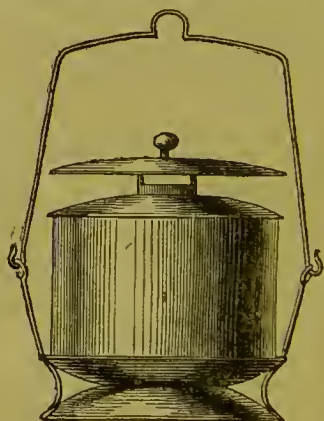
OUTLAWRY.—The being put out of the pale of the law, or out of the sovereign's protection. It is a punishment inflicted for a contempt, in refusing to be amenable to the process of the higher courts. By outlawry in civil actions, a person forfeits the protection of the law; so that he is not only incapable of suing for redress of injuries, but may be imprisoned, and forfeits all his goods and chattels, and the profits of his land, his personal chattels immediately upon the outlawry, and his chattels real, and the profits of his lands when found by inquisition.

OVEN.—The culinary apparatus employed in baking. For baking bread, a brick oven, heated with wood is far superior to any other; in iron ovens the bread becomes hardened and browned long before the heat has sufficiently penetrated to the centre of the dough. A brick oven should be well heated with faggot wood, or with a faggot and two or three solid logs, and after it is cleared the door should be closely shut for quite half an hour before the baking commences; the heat will then be well sustained for a succession of bread, pies, cakes, and small pastry. The ordinary oven attached to grates is well-known, it is a mere chamber of iron, with flues conveying the heated products of the fire round it. A damper cuts off or admits these, and in many grates the cook is enabled by raking the hot coals into a chamber provided for the purpose, to increase the heat very considerably. For baking, all the steam is purposely confined; but when these ovens are used for roasting, certain ventilators are opened, and then cause a current of air, which takes off in some measure the peculiarly rank flavour generally accompanying this kind of cookery. When the oven is being made use of, the door of it should not be continually opened and shut, as these incessant variations of the temperature materially interfere with the process of baking. In London and many large towns, the oven is but comparatively little made use of, the housewife preferring in the majority of cases the expense and inconvenience of sending to the baker, instead of making her own oven available; this frequently arises from the imaginary difficulty of heating the oven, or the trouble which the cooking of the dish entails; but with a little management

neither of these evils need exist. The American oven may be used with advantage for small joints, &c., in lieu of the more cumbersome and unwieldy roasting apparatus. They also answer admirably for delicate sweet puddings and for cakes, with the advantage of requiring but a very moderate fire. One of the objections to the American oven which has hitherto existed, has been the inability to baste the meat, and the consequent waste of dripping, which, owing to the reflective power exercised upon it, was so burned and dried up, as to render what remained useless. To remedy this evil, an improvement has been introduced, as seen in the annexed engraving,



by which all the dripping and nutritious quality of the meat is carried into a dripping pan, placed in such a position, that the meat can be thence basted without removing the oven from the fire, or interfering in any way with the progress of the cooking. A baking



apparatus has been recently introduced, called the "revolving oven." This is suspended in the front of an ordinary fire, and by means of a bottle-jack, and a piece of string or worsted, will bake bread, cakes, pies,

&c., in a perfectly equal manner, without depriving the room of the heat and comfort of the fire. By an ordinary fire, in any room in the house, it will bake a four pound loaf in an hour and twenty minutes. It also bakes cakes and pastry remarkably well, and all the care it requires is to give it an occasional look now and then, to see that it keeps turning.—See BAKING, DUTCH OVEN, &c.

OXALIC ACID.—One of the vegetable acids possessing poisonous properties. It is generally met with in the form of small white crystals. The appearance of these crystals, somewhat resembling Epsom salts, has occasioned many cases of accidental poisoning. The symptoms produced by poisoning by oxalic acid vary considerably. When a large dose has been swallowed, the chief effect is complete prostration of the system, accompanied with stupor, in which the patient often dies, half an hour after taking the poison. The rapidity with which death sometimes ensues after a poisonous dose of oxalic acid has been swallowed, renders it almost impossible to procure medical aid in time. It is therefore highly desirable that prompt measures should be adopted by those around. Oxalic acid forms, with lime, magnesia, &c., insoluble and less hurtful compounds. Chalk or whiting mixed with water, and administered freely is the best possible antidote; and when neither of these are attainable, a portion of old mortar rubbed with milk and water will act as a substitute. It must be understood that these remedies are of a temporary nature and adapted to emergencies; while they are being applied, the assistance of a medical man should be sought for.

OXEN.—See CATTLE; Cow, &c.

OXEN-TAMING.—Servants in attendance upon cattle are frequently attacked, and if not killed, are seriously injured by them. A plan for the prevention of such occurrences is suggested in the Journal of the Agricultural Society, which has been

of the bull's horn; *ac*, is an iron rod hanging on a pivot in the cap, a chain from it leads to a ring in the bull's nose. The end of the rod *ac*, at *a*, fig. 1, ought to be in a line from the root of the horn to the end of it; so that in attempting to touch anything with his horn, the point *a* comes in contact with it, when of course the rod *ac* takes the position of one of the lines in fig. 2, *de* or *gh*, and punishes the bull by forcing up his nose.



Fig. 2.

The practical farmer who invented this plan, states that he turned a three year old savage bull with a cow that was bulling, and also turned a yearling bull with them; in a few minutes the young bull, who had not on the check, found that he was the master, and punished the old one very severely; shortly afterwards the check was dispensed with. He never again attacked any one, although when purchased, he had tossed several persons, and had been sold as incurably vicious.

OX CHEEK, BAKED.—Cleanse with the greatest nicety, a fresh ox-cheek, by washing, scraping it lightly with a knife, and soaking out the blood; then put it into plenty of warm water, and boil it gently for an hour. Throw in a large teaspoonful of salt, and carefully remove all the scum as it rises to the surface. Let the ox-cheek cool after it is lifted out, and then take away the bones, working the knife close to them, to avoid piercing the skin. When the cheek has become quite cold, put into it a good roll of forcemeat; then skewer or bind up the cheek securely, and bake it in a moderate oven for about an hour and a quarter to an hour and a half. It should be baked until it is perfectly tender quite through. Drain it thoroughly from fat, dish it, withdraw the skewers or unbind it gently, and send it to table, with good brown gravy, a cut lemon, and cayenne pepper.

OX CHEEK SOUP.—Boil the ox cheek in water just enough to cover it for two hours and a half, then take it out, and cut off all the meat into squares, having in the meantime prepared a soup as directed for ox tail; then add the square pieces of meat, and serve.—See OX TAIL SOUP.

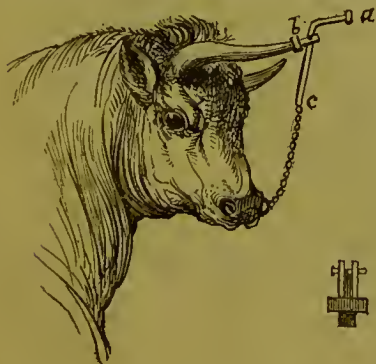



Fig. 1.


attended with perfect success. It is simple, inexpensive, costing about five shillings, and causes no annoyance to the animal when he does not try to use his horns. In the engraving, fig. 1, *b*, is a cap screwed on to the end

OX CHEEK STEWED.—Clean the head thoroughly, then soak it for some hours in cold water, put it into a stewpan, and let it simmer gently until it is quite tender; take out the bones, and tie the meat up in a cloth, put a weight upon it, and let it stand till next day; make a forcemeat of any white meat, and boil six eggs hard, cut the cheek into slices, put some at the bottom of a dish, then a layer of forcemeat, followed by a layer of sliced egg, another of meat, and so on until the dish is full; season the whole with pepper and salt, and pour in as much gravy as the dish will hold; either stew it in the usual way, or cover it with a coarse paste, and bake it in a slow oven, removing the paste previously to its being served.

OX FEET JELLY.—To three ox feet made into very stiff stock, allow two pounds and a half of brown sugar, the juice of six lemons, a pint and a half of table-beer, seven eggs, a quarter of an ounce of isinglass, and a gill of vinegar. Boil all these ingredients together for a quarter of an hour, take the pan off the fire, and let it stand before the fire for five minutes, then strain the contents through a jelly-bag, and the jelly will be perfect.

 Ox feet, 3; sugar, 2½ lbs.; lemons, juice of 6; table-beer, 1½ pints; eggs, 7; isinglass, ¼ oz.; vinegar, 1 gill.

OX GALL.—A preparation for cleaning carpets, removing stains, &c., made as follows:—Boil together a pint of ox gall and two ounces of powdered alum; add two ounces of salt, let the liquor settle, add ten drops of essence of lemon, pour it into a bottle, and cork it tightly for use.

 Ox gall, 1 pint; alum, 2ozs.; salt, 2ozs.; essence of lemon, 10 drops.

OX KIDNEY.—This part of the animal being coarse and innutritious, will scarcely repay the trouble of dressing it alone; its best use is as an auxiliary to rump-steak pudding.

OX TAIL SOUP.—Cut six large onions into slices; put them into a stewpan, with half a pound of beef dripping, brown them over the fire, then add two carrots, sliced thin, a bunch of savoury herbs, a small quantity of allspice and whole pepper, slightly bruised; stew these ingredients together for an hour, put half a pound of flour in the oven to dry, and take care that it does not burn; add this with a quart of stock to the herbs, and mix all well together. Have ready two gallons of stock boiling in a separate pot, into which put the herbs, &c., and boil the whole for an hour; strain it through a hair sieve, put in the ox tails, and serve. The ox tails should be allowed to simmer in water for three hours previous to being put into the soup.

OX TAIL STEWED.—Cut two or three ox tails into pieces, lay them in a stewpan, with a piece of butter and a large onion, and fry them till they are brown; peel and boil two dozen button onions in about three pints of water for fifteen or twenty minutes; set them by, and pour the liquor they were

boiled in upon the tails, adding sufficient boiling water to cover them; put in two carrots, three or four turnips, cut into slices, the carrots to be put in twenty minutes before the turnips. Stew them carefully, not too fast or too much. When they are tender, pass the gravy through a sieve; skim off the fat with great care while the tails are stewing. Keep the meat and vegetables hot before the fire. Thicken the gravy, by putting an ounce of butter into a stewpan; when melted, stir in as much flour as will stiffen it. Pour the gravy in by degrees, stirring it till it boils; strain it through a sieve into a stewpan, and let it simmer gently till the meat and vegetables are dished. Arrange the tails round the dish, and then place the vegetables in the centre; pour the gravy over, and add, according to taste, minced gherkins or capers. Pour boiling water over the onions to warm them, and put them round the dish last of all.

OX TONGUE BOILED.—If the tongue has been dried and smoked, it should be laid for two or three hours into cold water, and as much longer into tepid water, before it is dressed. But if it is taken fresh from the pickle, it will require no soaking unless it should have remained in much beyond the usual time, or have been cured with more than an ordinary proportion of salt. To boil it, put it into cold water, and set it over a slow fire for an hour or two before allowing it to come to a boil; then set it aside, and keep it simmering for from three and a half to four hours, according to its size: it may be probed by a skewer, to ascertain if it be sufficiently done. Then take it from the pot, trim the root, glaze it, and before serving surround the root with a paper frill, and insert a flower or two on the top, over the windpipe. The appearance and flavour of the tongue may be considerably improved by rubbing it over, when peeled, with yolk of egg, on which crumbs of bread and finely minced sweet herbs may be strewed; afterwards, slightly basting it with butter, and browning it with a salamander.

OX TONGUE CURED.—This process may be ordinarily performed as directed for beef and ham. For such, however, as prefer it highly and richly flavoured, the following method may be adopted:—Rub over the tongue a handful of fine salt, and let it drain until the following day; then, supposing it to weigh from seven to eight pounds, mix thoroughly an ounce of saltpetre, two ounces of coarse brown sugar, and half an ounce of black pepper; when the tongue has been well rubbed with these, add three ounces of bruised juniper berries; and after the tongue has lain for two days, add eight ounces of bay-salt dried and pounded; at the end of three days more, pour on it half a pound of treacle, and let it remain in the pickle for a fortnight after this; then hang it up to drain, envelope it in brown paper, and send it to be smoked over a wood fire for two or three weeks. Should the peculiar flavour of the juniper berries prevail too much or be disapproved,


they may be in part or wholly omitted; and if treacle is disliked, six ounces of sugar may be used in lieu of it.—See BEEF SALTED, BEEF SMOKED, HAM TO CURE, &c.

OX TONGUE, DRESSED TO EAT COLD.—Season the tongue with common salt, salt-petre, brown sugar, pepper, cloves, mace and allspice in fine powder, for a fortnight; then take away the pickle, put the tongue into a pan, and lay some butter on it; cover it with brown crust, and bake it slowly till so tender that a straw will pierce it from one end to the other; put it into a tin mould and press it well, laying in as much fat as possible.

OX TONGUE POTTED.—Boil till tender, an unsmoked tongue of good flavour, and on the following day cut from it the quantity desired for potting. Trim off the skin and rind, weigh the meat, mince it very small, then pound it quite fine with a quarter of a pound of butter to each pound of tongue, a small teaspoonful of mace, half a teaspoonful of nutmeg and cloves, and a seasoning of cayenne. A few ounces of any well roasted meat mixed with the tongue, will give it a firmness in which it is apt to be deficient.

OX TONGUE ROAST.—Select a fine large fresh tongue, scald it, and peel off the skin; cut it off at the root and trim it neatly; stick a few cloves in it here and there, and put it in a cradle-spit; sprinkle it with salt, and haste it well with butter. Serve it with a sauce made as follows:—Put into a stewpan half a pint of port wine, with about half the quantity of well-seasoned gravy; reduce it to one half; then stir in a large piece of butter, and a tablespoonful of flour; add a squeeze of lemon; place the tongue in a dish, and serve hot with the sauce poured round.

OXFORD DUMPLINGS.—Take two ounces of grated bread, a quarter of a pound of shred suet, a quarter of a pound of currants, two tablespoonfuls of flour, a lemon-peel grated, and sugar to sweeten. Mix these ingredients with two eggs and a little milk, divide into five dumplings, and fry them a fine yellow brown. Serve with sweet sauce.


 Bread, 2oz.; suet, $\frac{1}{2}$ lb.; currants, $\frac{1}{2}$ lb.; flour, 2 tablespoonfuls; lemon-peel, 1; sugar, to sweeten; eggs, 2; milk, sufficient.

OXYGEN.—A gas which constitutes one of the elementary bodies, and of the utmost importance to vitality. Oxygen gas in mechanical mixture with nitrogen, constitutes the air of the atmosphere which surrounds our globe, and on its presence in due proportion, depends the continuance of animal existence, the phenomena of combustion, &c.—See *Dictionary of Useful Knowledge*: article OXYGEN.

OYSTER CURRY.—The following receipt for this dish may be greatly modified, both in quantity and ingredients. Open a hundred large oysters into a basin, carefully preserving every drop of their liquor. Put a lump of fresh butter into a large stewpan, and when it boils add a good-sized onion cut into thin slices, let this fry until it is of


a rich brown colour, then a piece more butter and two or three tablespoonfuls of curry powder. When these ingredients are well mixed over the fire with a wooden spoon, add gradually, either hot water or broth from the stock-pot; cover the stewpan and let the whole boil up. Meanwhile, grate fine a small cocoa-nut, and put it into the stewpan with a sour apple chopped. Let the whole simmer over the fire until the apple is dissolved, and the cocoa-nut become tender; then add a couple of strong thickening made of flour and water, and a seasoning of salt. Let this boil up for five minutes. Have ready a vegetable marrow, cut into small pieces, and sufficiently boiled to require little or no further cooking. Put this in with a tomato or two. Then place in the stewpan the oysters with their liquor, and the milk of the cocoa-nut if it be perfectly sweet; stir them well with the former ingredients. Let the curry stew gently for a few minutes, then stir in the strained juice of half a lemon. Stir the curry from time to time with a wooden spoon, and as soon as the oysters are sufficiently done serve them up with their liquor, and with a corresponding dish of rice on the opposite side of the table.

OYSTER FORCEMEAT.—Strain a dozen native oysters from their liquor, mince them, and add a quarter of a pound of finely-grated bread crumbs, an ounce and a half of butter broken very small, a dessertspoonful of minced parsley, and the rind of half a lemon grated; season with a little mace, cayenne, and salt, and mix the whole well together; then bind the ingredients together with the yolk of an egg unbeaten, and a little of the oyster liquor.

 Oysters, 1 doz.; bread crumbs, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ oz.; parsley, 1 dessertspoonful; lemon rind, $\frac{1}{4}$ of 1; mace, cayenne, salt, to season; yolk of egg, and oyster liquor, sufficient.

OYSTER FRITTERS.—Remove the heads from the oysters, dip them into a thick batter, made wet with egg, and fry them till they are of a light brown.

OYSTER KETCHUP.—Open a hundred oysters and preserve all the liquor; add to them a pound of anchovies, three pints of white wine, and a lemon sliced with half the peel, let these boil gently for half an hour, then strain it through muslin; add to it a quarter of an ounce each of cloves and nutmeg, let it boil for a quarter of an hour, then add two ounces of shalots. This ketchup imparts an exquisite flavour to white gravies and sauces, as those for minced veal, boiled fowl, &c.

 Oysters, 100; anchovies, 1lb.; white wine, 3 pints; lemon, fruit of 1, peel of $\frac{1}{4}$ of 1; cloves, $\frac{1}{2}$ oz.; nutmeg, $\frac{1}{2}$ oz.; shalots, 2oz.

OYSTER KNIFE-GUARD.—An ingenious yet simple contrivance, by which the hand, and especially the thumb, is protected from any possible damage which the knife used in opening oysters might cause. Two flat pieces of wood are fastened together at one end by a strip of leather, as shown in the illustration; in the lower and larger piece

a cavity is made for the reception of the oyster, which is firmly grasped between the upper and lower portions of the guard, and in the event of the knife slipping, its point



is received by the former. The importance of such an invention to amateur oyster openers needs not to be pointed out.

OYSTER PATTIES.—Put fine puff-paste into small patty-pans and cover them with paste, with a bit of bread in each; bake them, and by the time they are done have ready the following, to fill them with on taking out the bread:—Take off the beards of the oysters, cut the other parts into small bits, put them into a small tosser with a little nutmeg, a very little white pepper and salt, a shred of lemon-peel cut exceedingly small, a very little cream, and a small portion of the oyster liquor. Simmer this for a few minutes, then fill the patty-pans and serve.

OYSTER PICKLE.—Open the oysters very carefully and remove every particle of shell adhering to the fish; put the oysters into a little water, wash them in it, and strain the liquor; boil it with a little vinegar, whole pepper, salt, and mace, till it tastes of the spices: then put in the oysters. If they are large they must boil for eight minutes, if small, not so long. Put them into pickle jars, and when the liquor is cold, pour it upon the oysters. To four dozen oysters put six spoonfuls of water and four of very good vinegar, tie the jars securely down with bladder.

OYSTER PIE.—On opening the oysters, separate them from the liquor and strain it; remove the beards, and parboil the fish. Parboil also sweetbreads, and cutting them into slices, lay them and the oyster in layers alternately; season very lightly with salt, pepper, and mace, then add half a teacupful of oyster liquor and the same of real gravy. Bake the whole in a slow oven, and before serving, add a teacupful of cream, a little more oyster liquor, and half a pint of white gravy, all warmed but not boiled.

OYSTER POWDER.—Open the oysters carefully, so as not to cut them, except in dividing the gristle which attaches the shells. Put them into a mortar, and when as many are collected as can be conveniently pounded at one time, add salt in the proportion of two drachms to a dozen oysters. Pound them and rub them through the back of a hair sieve, and put them into the mortar again with as much flour as will convert them into a paste; roll this paste out several times, and lastly flour it, roll it out the thickness of a half-crown, and cut it into pieces about an inch square, lay them in a

Dutch oven to dry gently without being burnt; turn them every half hour, and when they begin to dry, crumble them. Pound them, sift them, and put them into dry bottles, which afterwards cork and seal. To make half a pint of sauce, put an ounce of butter into a stewpan, three drachms of oyster powder, and six tablespoonfuls of milk, set it on a slow fire, stir it till it boils, and season with salt.


OYSTER RAGOUT.—Put three dozen of oysters with their liquor into a saucepan, as soon as they have boiled take them off, and let them drain nearly dry; then put them into another saucepan with or without herbs, according to taste, and a little butter, adding also half a pint of milk; keep them for a few minutes simmering, and a minute before they are taken off the fire, add about two ounces of butter, and a seasoning of pepper and salt.

OYSTER ROLLS.—Take about a quart of the largest and finest oysters that can be procured, stew them in their own liquor, with some pepper, a very little mace, and some green onion chopped fine, thicken them with a little butter, and a dust of flour when nearly done. Take two French rolls, cut a piece off the top, and scoop out the greater part of the crumb, fill the vacancy with the oysters and the liquor, and set them near the fire on a chafing-dish filled with hot coals; as the liquor soaks in fill them with more, until they are thoroughly done.


OYSTER SAUCE.—This may be prepared in a variety of ways:—1. Scald the oysters in their own liquor, heard them, strain the liquor and let it settle; melt a piece of fresh butter, add flour sufficient to thicken the quantity of sauce, let it fry a little, pour in the liquor of the oysters and sufficient cream to render it of the required thickness, season with salt and cayenne, and put in the oysters. 2. At the moment they are wanted for use open three dozen oysters, strain and save the liquor, rinse them separately in it, put them into a very clean saucepan, strain the liquor again and pour it on them, beat them slowly, and simmer them for one or two minutes, without allowing them to boil. Lift them out and beard them, add to the liquor three ounces of butter smoothly mixed with a large dessertspoonful of flour, stir these without ceasing until they boil, and are perfectly mixed; then add to them gradually a quarter of a pint of new milk, and continue the stirring until the sauce boils again; add a little salt should it be needed, and a small quantity of cayenne, put in the oysters, and place the saucepan by the side of the fire until the whole is thoroughly hot and begins to simmer, then turn the sauce into a well-heated tureen, and send it to table immediately. 3. Prepare two dozen oysters as in the preceding receipt, add their strained liquor to a quarter of a pint of thick melted butter made with milk, or with half milk and half water, stir the whole until it boils, put in the oysters, and when they are quite heated through, send the sauce to table without delay. 4. The following is best adapted to be served with rump steak or roast turkey. As the butter destroys the

savouriness of the meat, the oysters instead of being stewed in white sauce, should be dressed in strong beef gravy, along with a good portion of ketchup, either stewed for a few minutes very gently or put into an uncovered dish with the gravy, and placed before the fire in a Dutch oven to brown.

OYSTER SAUSAGES.—Beard, rinse well in their strained liquor, and mince, but not finely, three dozen and a half of plump oysters, and mix them with ten ounces of grated bread crumbs, and ten ounces of beef suet chopped extremely small, add a saltspoonful of salt, and one of pepper, a teaspoonful of pounded mace, and the third of a nutmeg grated, moisten the whole with two eggs unbeaten. Mix these ingredients together thoroughly, and set the mixture in a cool place for two or three hours, make the mass into the form of sausages, flour them, and fry them in butter to a fine light brown.

 Oysters, 3½ doz.; bread crumbs, 10oz.; beef suet, 10oz.; salt, 1 saltspoonful; pepper, 1 saltspoonful; mace, 1 teaspoonful; nutmeg, ⅓ of 1; eggs, 2.

OYSTER SOUP.—Put the liquor of ten dozen large oysters into a stewpan with a quart of new milk, and the same quantity of water, season with pepper and salt, and thicken with half a pound of fresh butter and flour, let this boil for a few minutes, after which set it to cool, then beard the oysters, add them to the liquid, and let them boil for two minutes at the utmost, a little nutmeg may be added if the flavour is approved.

 Oysters, 10 doz.; milk, 1 quart; water, 1 quart; pepper and salt, to season; butter, ½ lb.; flour, to thicken.

OYSTERS BAKED.—Chop oysters fine, and pound them in a mortar with bread crumbs dipped in cream, a little parsley and cloves, an anchovy, or a portion of one according to the number of oysters, fresh butter, salt, and pepper. When well pounded add white of egg beaten up, in the proportion of one egg to two dozen oysters, and having mixed all well together put into scallop shells and bake in an oven until nearly brown.

OYSTERS BOILED.—Open the shells of the oysters and clean and drain them into boiling water, then drop the oysters into a saucepan of boiling water, and boil them gently for three or four minutes. Serve in the shells with a little cold butter, vinegar, and pepper.

OYSTERS BROILED.—Take them from the shells, beard them, and put them with their liquor into scollop tins with a little pepper and butter. Put the shells upon a gridiron over a good fire, and serve them when plump and quite hot. Squeeze a little lemon-juice over them as they come from the fire. To be had to perfection, they should be cooked in the room in which they are eaten.

OYSTERS, DIETETIC PROPERTIES OF.—Few articles of food are more nourishing and digestible than the oyster when eaten raw or slightly cooked; with some persons, however, oysters even in a raw state disagree; in this case, each oyster should be

dipped, before it is eaten, in a sauce composed of vinegar, pepper, and shalots or mild onions, chopped fine. Oysters should be eaten the moment they are opened, for if not eaten when absolutely alive their flavour and spirit are lost. When too many oysters have been incautiously eaten, and are felt lying cold and heavy on the stomach, an infallible remedy will be found in hot milk, of which half a pint may be drunk, and it will quickly dissolve the oysters into a bland creamy jelly. Weak and consumptive persons should always take this after their meal of oysters. The drinking of wine or spirits immediately after eating oysters is injudicious, and calculated to make the oysters disagree; the best beverage is porter or stout. Oysters are especially well adapted for supper, on account of their digestible properties; but in order to afford the greatest amount of nutriment they should be taken fasting.

OYSTERS FRIED.—Make a batter of flour, milk, and eggs; season it slightly with pepper and salt, dip the oysters into it, and fry them to a light brown. A little nutmeg should be added to the seasoning, and a few bread crumbs.


OYSTERS MARINADED.—Put the oysters into a saucepan for a few minutes, to blanch with their liquor; take them out, lay them on a linen cloth to drain for an hour; next place them for two or three hours in lemon-juice, or vinegar, pepper, and salt, with a little nutmeg; dip them in batter, and fry them.

OYSTERS ROASTED.—Place the oysters unopened between the bars of a fire or on a charcoal stove. In six or eight minutes they will be done.

OYSTERS SCALLOPED.—Select small plump oysters, open them carefully, and give them a scald in their own liquor, wash them in it free from grit, and beard them neatly. Butter the scallop-shells and shed some grated bread-crumbs over them; fill them with alternate layers of oysters, bread crumbs, and fresh butter cut into small bits; pour in the oyster liquor after it has been strained; put a thick, smooth layer of bread crumbs on the top, moisten them with clarified butter, place the shells in a Dutch oven before a clear fire; and turn them often until the tops are equally and lightly browned. Send them immediately to table.

OYSTERS STEWED.—Take a pint of small plump oysters, after having been carefully opened; wash them free from grit in their own strained liquor, lay them into a very clean stewpan or well-tinned saucepan, strain the liquor a second time, pour it on them, and heat them slowly in it. When they are just beginning to simmer, lift them out with a fish-slice or a bored wooden spoon, and take off the beards; add to the liquor a quarter of a pint of good cream, a seasoning of pounded mace and cayenne, and a little salt; when it boils, stir in an ounce and a half of fresh butter, smoothly mixed with a large teaspoonful of flour; continue to stir the sauce until these are perfectly blended with it, then put in the oysters, and let them remain by the side of

the fire until they are very hot; they require so little cooking that, if kept for four or five minutes nearly simmering, they will be ready for table, and they are quickly hardened by being allowed to boil, or by too much stewing. A little lemon-juice should be stirred quickly into the stew, just as it is taken from the fire.

 OYSTERS, 1 pint; cream, $\frac{1}{2}$ pint; cayenne, mace, and salt, to season; butter, 1 $\frac{1}{2}$ oz.; flour, 1 teaspoonful.

OYSTERS, TO CHOOSE.—If the oysters are fresh, the shell will be firmly closed; when the shells of oysters are opened, they are dead and unfit for food. The small oysters, as the Pyfleet, Colchester, and Milton, are the finest in flavour. Larger kinds, called rock oysters, are only fit for stewing and sauces. Oysters are considered not in season until the 4th of August, and remain good until about May. But it is commonly said that oysters are only fit to be eaten during those months which have an *r* in them, as September, October, November, December, January, February, March, and April.

OYSTERS, TO FEED AND PRESERVE.—To feed oysters, put them into water, and wash them with a birch-besom until quite clean; then cover them with cold water, in which salt has been dissolved, in the proportion of five ounces to the gallon; this should be regularly changed every twenty-four hours. By this method, oysters may be kept alive for eight or ten days, but will remain in perfect condition scarcely more than half that time. The Colchester or Pyfleet barrelled oysters, that are packed at the beds, are better without being put in water; they are carefully and lightly packed, and must not be disturbed till wanted for table; these in moderate weather will keep good for a week or ten days. To preserve the life of barrelled oysters, put a heavy weight on the top of the barrel, which must press on the surface of the oysters. This is to be effected by removing the first hoop, the staves will then spread and stand erect, make a wide opening for the head of the barrel to fall down closely on the remaining oysters, keeping them close together. When oysters are placed in water, they should lie with the flat shell uppermost; otherwise they will not be able to feed properly.

P.

PACKING.—The art of packing things properly so that they may not be broken, bruised, or otherwise damaged, is one worth knowing and easily learned. Generally speaking, miscellaneous articles should be packed in their receptacles as tightly as possible, to prevent their shipping about, and any vacancies or crevices should be stuffed with straw or waste paper, so as to accomplish this end; when the box or other receptacle is not quite full, it should also be filled up with

straw or waste paper, so as to prevent the contents jolting up and down. When a person is about to pack he should proceed deliberately, as packing hastily is never successful. He should have all the articles which are to be packed spread out upon the floor by the side of package, so that appropriate places may be found for each article. In nailing down boxes, care should be taken neither to drive the points of the nails into the contents of the box, nor to leave them protruding on the outside so as to tear people's clothes and flesh. The heaviest articles should be laid at the bottom, and the lightest at the top. All fragile articles should be packed by themselves. Bottles and other vessels containing liquids should also be packed by themselves, the mouths of the vessels properly secured, and the vessels set upright. Fish, meat, and poultry should be packed so that the air may have access to them. In packing vegetables, the great art is to preserve them fresh, for which purpose they ought to be laid loose in a close box, or closely packed in hampers so as to exclude the air. Cabbage, lettuce, &c., if pulled up by the roots and as it were re-planted in a box of sand, with a wicker-work cover, may be sent a journey of two or three weeks without injury. Celery, turnips, &c., may be packed in sand; potatoes and other roots loose; legumes, and other summer crops, generally in moss, fern, or dried turfy peat. In packing boxes of fruit which are to contain, for instance, melons, currants, pears, peaches, nectarines, plums, and grapes, obtain a box made of three-inch deal and well-secured with iron clasps at each corner: first put a layer of fine dry moss in the bottom of the box, then pack in the melons in rows, making the rows light by stuffing moss into the interstices; when a layer of these is completed, place a thin layer of moss and grass over them, and then pack the pears in the same manner and proceed with the peaches, nectarines, and plums, and lastly the grapes, filling up the box with moss, that the lid may shut down tightly and prevent friction among the fruit. The melons should be wrapped in soft paper, and the pears, peaches, nectarines, plums, and grapes first wrapped up in vine leaves and then in paper. The moss and grass should always be returned in the boxes, which, with a little addition, will serve the whole season, being well-shaken up and aired after each journey, and then kept sweet and clean. When moss is difficult to obtain, cotton may be substituted. As the fruit is packed it should be carefully examined, any that is found to be bruised should be set on one side, otherwise it is apt to contaminate the whole. For packing plants, especially when intended to travel long distances, the contrivance known as Ward's plant case is the best that has been yet discovered; it consists of a wooden box six or eight inches deep, and a glazed frame with a ridged roof, so contrived that light may be admitted freely to all parts of the growing plants. The glazed frames should be well painted and puttied some time before they are required for use, in order that when they are put together, they may be suffi-

ciently tight to retain all the moisture that is within the case, and to restrain all moisture from without. Especial care should be taken that the soil used be that in which the plants usually grow, and that all superfluous moisture be drained from it. Another point deserving of attention is to associate plants of equal or approximating rapidity of growth. A packing-box for florists' flowers, as seen in the engraving, may be formed of



boards of any convenient size, and two round pieces of wood, *a*, *b*, nailed to the lid to keep the pot in its place. In unpacking, there is no difficulty, as the round pieces come up with the lid.

PADLOCK.—A lock frequently employed for fastening gates, wickets, cellar doors, &c. As these locks may be easily tampered with, none but the patent ones should be used, which are not only impossible to pick, but which, by refusing to answer to the proper key without it is turned in a contrary direction, gives at once an indication that some other key has been introduced, and therefore furnishes a clue to dishonesty. It is possible, however, in ordinary cases to remove the staple to which the lock is attached, and replace it without giving rise to any suspicion; to prevent this, the staple should form part of a plate iron, so contrived and fixed that it is impossible to withdraw it. Padlocks are frequently lost, thereby leaving places in a temporarily unprotected state, and causing much loss of time, from mere carelessness in throwing the lock down anywhere when it is taken off; the obvious plan, therefore, is always to place the lock in some especial spot, so that when it is wanted again it may be found immediately.

PAGE, DUTIES OF.—A juvenile male servant, whose duties chiefly consist in performing light miscellaneous offices about the house, opening the door, going on errands, walking behind his mistress, waiting at table, &c. For this service, youths possessed of good figures and pleasing looks are usually selected, and they are expected to have an amount of intelligence and readiness to fit them for their multifarious duties. A certain amount of education is also essential for youths who are destined to fill this post. They should be able to read and write; and as they are often brought in

contact with their superiors, they should be grounded sufficiently in the grammatical rules of the language, to enable them to deliver messages, and answer questions correctly and coherently. A page in a good family has an excellent situation, and if he behave himself, he is almost sure of promotion; thus, as he grows up, he is promoted through the various grades of service, until he arrives at the comparatively easy and remunerative one of butler, bailiff, or even steward.

PAIL.—A well-known utensil in frequent requisition in domestic and rural economy. The American pail is an improved kind recently introduced, and is lighter and of less awkward construction than the old-fashioned sort. Pails should be seasoned immediately after they are bought and before they are used, by which means they will last longer. When they are done with, they should be turned bottom upwards, and placed in the back kitchen or an outhouse. Leaving water to stand in them for any length of time proves very destructive. Many accidents have occurred through pails being left carelessly standing on stairs; to avoid such catastrophes, when a servant is thus engaged with a pail, and is called away, if only for a few minutes, she should first of all place the pail in the corner of the nearest landing, where there is no possibility of any one running against it. Pails are very roughly used by many persons letting them strike the stones heavily; this wears them out very fast, and may easily be avoided by moving them from place to place more carefully.

PAIN.—The sensation whereby we are made aware of some derangement of the system, and which may be situated in any part of the body. The effect which pain has, depends materially upon the temperament of the person, some subjects being extremely sensitive and unable to bear the slightest pain without murmuring, whilst others are altogether as callous, and do not complain under the greatest suffering. Many pains only last for a few hours or moments, and leave as suddenly as they came, or are alleviated by some simple remedy. When, however, pain makes its presence felt for some days in succession, it is a pretty sure sign that some derangement exists, which requires the aid of medical treatment. Although it is easier to give advice to persons who are suffering pain than it is to take it, yet there cannot be a doubt that the pangs of the body may be considerably assuaged by employing the mind in some occupation which calls it off from the contemplation of the bodily ailments which for the want of some other employment it is sure to indulge in.

PAINT.—A composition used for coating wood, stones, and metal with, for the purpose of protecting them against the effects of the atmosphere, and the ravages of time. The composition of paint is varied, according to the purpose to which it is put. *White house-paint* may be made as follows:—Two quarts of skim-milk, eight ounces of fresh slaked lime, six ounces of linseed oil, two

ounces of white Burgundy pitch, three pounds of Spanish white. The lime must be slaked in water, exposed to the air, mixed in about one-fourth of the milk; the oil in which the pitch is previously dissolved must be added gradually, then the rest of the milk, and afterwards the Spanish white. This quantity is sufficient for twenty-seven square yards, and the expense will not exceed a shilling. To make a *cheap paint impervious to the weather*:—Dissolve eight pounds of glue in boiling water, and with this slake a bushel of quicklime until it becomes of the usual consistence of paint. Lay on three coats of this mixture with a painter's brush, taking care that each coat is dry before it is succeeded by another; over the third dust sand or grey-stone dust from a dredger. By mixing ochre with the wash, any colour desired may be obtained. It may be made green by mixing common blue and yellow ochre, and applying them hot. For a *green paint for garden stands, &c.*:—Mix a quantity of mineral green and white lead, ground in turpentine, with a small portion of turpentine varnish for the first coat; for the second, put as much varnish in the colour as will produce a good gloss. To obtain a *substitute for oil-paint*:—Pour a gallon of boiling water upon a pound of quicklime and two ounces of sugar of lead. When the lime has become completely slaked, the mixture is to be stirred, and it is then fit for use. If required thicker, less water must be used. Colouring ingredients may be added at will. This composition is about one-twelfth less in cost than that of oil-paint, and possesses almost equal efficacy and beauty. When exposed to the weather, it requires one coat or foil to protect it.

PAINT, TO CLEAN.—When painted wainscot or other woodwork requires cleaning, soft soap and fuller's earth, with warm water and a flannel, will be the best things to use. This work should be performed by proceeding from the top downwards, and the water should be prevented from running on the clean parts as much as possible, or marks will be made which will appear after the whole is finished. One person should dry with a soft linen rag as fast as another person has scoured off the dirt and washed away the soap. When paint is solled in parts only, and does not require a general cleaning, dip a sponge or a piece of flannel into soda and water, wash it off quickly, and dry immediately, or the soda will eat off the colour. When paint simply requires to have the dust removed from it, a cloth should not be used, but, after blowing off the loose particles with a pair of bellows, a little long-haired brush should complete the operation. With care, paint will look well for a long time, if guarded from the influence of the sun.

PAINT, TO REMOVE FROM CLOTH, &c.—After paint has once dried, it is extremely difficult to remove. Directly it comes in contact with the clothes, wipe off as much as you can, then apply to it repeatedly spirits of turpentine or spirits of wine, rubbed with a soft rag or a flannel. Ether will also efface it, if applied immediately.

PAINT, TO REMOVE THE SMELL OF.—The smell of paint, besides being very disagreeable, is liable to produce headache, sickness, &c., and sometimes occasion even more serious maladies. To remove the smell of paint from rooms, &c., both of the following methods will be found efficacious:—Place a vessel filled with lighted charcoal in the middle of the room, and throw on it two or three handfuls of juniper-berries, close the windows, chimney, and the door; twenty-four hours afterwards the room may be opened, when it will be found that the sickly unpleasant smell is entirely gone. The smoke of the juniper-berry possesses the advantage of leaving uninjured the tapestry, curtains, and other furniture of the room. Or, fill three or four new tubs with about eight gallons of water, and an ounce of vitriolic acid, and place them in the newly-painted room, near the wainscot; the water will absorb and retain the effluvia from the paint in three days, but the water should be renewed each day during that time.

PAINTED GLASS, TO PRESERVE.—As painted glass is generally protected by grating, it cannot be cleaned on the outside; in consequence of which, long continued damp produces a diminutive moss or lichen, which absolutely decomposes the substance of the glass. This evil would be in a great measure prevented by removing the grating annually, and carefully wiping away the mouldy moss when it begins to appear. It is remarkable that this disease prevails in some situations more than others. Painted glass has been known to remain in a dry situation for centuries uninjured, but on being removed into a moist and foggy atmosphere has lost almost all its beauty in twenty or thirty years.

PAINTING HOUSES, BEST SEASON FOR.—The outsides of houses should be painted during autumn or winter. Hot weather injures the paint by drying in the oil too quickly, and causing the paint to come off easily. But when the paint is laid on during cold weather, it hardens in drying, and is firmly set. The painting of the interior of houses should be regulated by the convenience of the occupants. If possible, they should endeavour to escape the annoyance by going out of town; but if that is not practicable, the painting should be done, at such a season as will allow them to be a good deal out of doors, so as to escape the unpleasant consequences as much as possible. It is hardly necessary to say that while the painting is proceeding, the furniture of the rooms should be carefully covered up. Birds, rabbits, and other domestic pets should also be removed from its influence, as, in many instances, the smell to these animals is sufficient to occasion disease, and even death. If the interior of a house is properly painted in the first instance, it will last for very many years, and obviate the necessity of re-painting during a moderately long tenancy. When, therefore, a person takes a house, he should turn his attention to this particular matter, and if the paint is imperfectly or

thinly laid on, insist on having it properly done, as one of the conditions of his catering upon occupation.

PAINTING PICTURES.—The first lesson in this art may be taken easily and cheaply. Take a piece of oilcloth or a millboard, a yard square. Paint it twice in drab or lead colour, then rub it with pumice, and wash it. Afterwards practise with the maulstick, a palette, and three or four brushes in white and black. The white may be whitening in milk, and the black lamp-black in beer. A sponge and water will remove one subject, and make way for others, till freedom of hand is attained.

PALING.—A fence made of wood, for protecting gardens, fields, and other enclosures. This kind of fence is better adapted for temporary purposes than for permanent use, for of whatever wood they are made, or however substantially they may be executed, their decay commences the instant they are erected, owing to that part of it which is set into the ground, being rotted by moisture. This decay may, however, be retarded in its course, by adopting certain measures for the preservation of the wood. For this purpose, it will be found an excellent plan to burn or char that part of the paling intended to be set into the earth, as this process hardens the wood and renders it impervious to moisture. Another means of preventing decay is to paint the whole of the wood, or otherwise fill the pores with oil, in such a manner as to prevent the entrance of moisture. Another very good remedy is the pyroligneous acid from gas-works, which, if the points of the standards that are to be driven into the earth are dipped into it while the liquor is boiling hot, will preserve them from the injurious effects of moisture for a very long time. Previously to the dipping, the palings should be properly sharpened, and that part which is to enter the ground, moderately charred. Common tar, melted pitch, or gas liquor, may also be successfully employed for the purpose of defending the extremities of the upright parts of paling from moisture; linseed and train oils may also be used with success. The wood should be completely dry before it is dipped in any of these preparations; for if they are either made of green wood or have imbibed much moisture, or, after being dipped are exposed either to the heat of the sun or a severe frost, the moisture will become so much expanded, as to burst through and bring off the paint or other coating. The simple nailed paling consists of upright posts, driven or set into the earth at certain distances, and crossed in three, or four, or more places, with pieces of wood in a horizontal direction. The jointed horizontal paling consists of massy square poles, driven or set into the earth at regular distances, through which mortices or openings are cut for the reception of the extremities of the horizontal pieces which traverse them. The upright lath paling is made by driving or setting a number of strong poles into the earth at regular distances, and crossing these at the top and bottom with horizontal pieces of equal strength; upon these last are nailed, at from

six to twelve inches distance, a number of square pieces of sawn wood.—See FENCE, HURDLE, &c.

PALLIASSE.—A kind of mattress which is placed next to the laths of the bedstead, and serves to form a firm foundation for the bed itself. Palliasses require little care, save an occasional heating to free them from dust, and exposing them to the air to sweeten them.

PALM OIL.—This is yielded by the fruit of a species of cocoa-nut, and is brought into this country as a substance of the consistence of butter. It is used as an external application for similar purposes as the olive and other oils.


PALSY.—See PARALYSIS.

PAN.—A well-known utensil, generally made of brown ware. The best kind of pans are those which are glazed on the inside, and have neither knots nor other inequalities on their surface.

PANADA.—A food suitable for children and aged persons, and others who are unable to masticate and digest more substantial fare. Put some crumb of new bread into a saucepan, with a little water, and boil it until it becomes a thick pap; add water and a little salt, as the bread absorbs the water which was first put in; when it has boiled for a short time, stir in quickly the yolks of two or three eggs previously beaten up. Milk panada is made by boiling the bread with very little water, and adding new milk and sugar when the bread has boiled; the milk should not quite boil. Nutmeg, cinnamon, lemon-peel, &c., may be added to the water panada, and a little white wine and sugar may be put to it before serving.

PANCAKE.—Pancakes may be made in various ways, according to the following receipts:—*Common pancake.*—Make a light batter of three spoonfuls of flour, three eggs well beaten, and half a pint of milk, some of which, with the eggs, is to be mixed with the flour; to the other part put a quarter of a pound of melted butter. Then mix altogether, and put into a fryingpan in a very thin layer. Fry with lard or dripping; but do not put any butter into the pan after the first frying, as they will give out enough, and afterwards to keep up the supply. Sugar and lemon should be served to eat with them. *Rich pancakes.*—To six tablespoonfuls of flour, add twelve eggs well beaten, half a pint of white wine, half a pound of melted butter, nearly cold, half a pound of powdered loaf sugar, a little grated nutmeg, a quart of cream, and a wineglassful of ratafia; mix the whole well; heat the batter for some time, and pour very thin into the fryingpan. When served, strew over with white pounded sugar. *Dutch pancakes.*—Mix a pound of flour with half a pound of sugar and a tablespoonful of powdered cinnamon; make the whole into a paste with ten eggs and a gill of white wine, when well mixed roll it out, and fry it, in the ordinary way. *French pancakes.*—Beat in separate basins the yolks and whites of ten eggs, mix with the yolks six tablespoonfuls of pounded white sugar, the same quantity of flour, a pint and a half of milk, the juice of a lemon, and half the peel grated,

with a little orange-flower water; add the whites of the eggs the last thing; fry to a good colour, and serve with grated sugar. *German pancakes*.—To the whites of six and the yolks of twelve fresh eggs, add, by degrees, three-quarters of a pound of powdered white sugar, a quart of good milk lukewarm, half a pound of melted butter, almost cold, a little good yeast, and a wineglassful of brandy; mix these ingredients well together, and stir in as much flour as will bring it to a thick batter; let it stand covered by the side of the fire for half an hour; then roll it out thin, cut it into square or oblong pieces, cover them with preserve or marmalade, double them, and after they have stood again for twenty minutes, fry them of a good colour in boiling lard. When served, sift sugar over them. *Madras pancakes*.—To six eggs well beaten, add six tablespoonfuls of boiled rice, sugar to taste, a little pounded cinnamon, a little orange-flower water; mix all well together, and fry in butter to a good colour. When served, divide it into quarters, and strew over with pounded loaf sugar. *New England pancakes*.—Mix a pint of cream, five spoonfuls of fine flour, seven yolks and four whites of eggs, and a very little salt; fry them very thin in fresh butter, and between each strew cinnamon and sugar. *Polonaise pancakes*.—Mix eight eggs with a pint and a half of cream or milk, and flour, two ounces of fresh melted butter, seasoned with grated nutmeg, raspings of lemon-peel, sugar to sweeten, and a little salt, and ten ounces of flour. Put into the frying-pan a little butter or lard, and when the batter is poured in, sprinkle it with currants, and powder it with sugar, when serving. *Apple pancakes*.—Mix two spoonfuls of flour in a gill of milk; when smooth add eight eggs, some pounded cinnamon, grated lemon-peel, two ounces of currants, and six middling-size apples peeled and chopped: mix all well together; melt some butter in a frying-pan; when hot, pour the whole mass in, and fry on both sides, served with powdered cinnamon and sugar.

 *Common pancakes*.—Flour, 3 tablespoonfuls; eggs, 3; milk, $\frac{1}{2}$ pint; butter, $\frac{1}{2}$ lb. *Rich pancakes*.—Flour, 6 tablespoonfuls; eggs, 12; white wine, $\frac{1}{2}$ pint; butter, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; nutmeg, to flavour; cream, 1 quart; ratafia, 1 wineglassful. *Dutch pancakes*.—Flour, 1 lb.; sugar, $\frac{1}{2}$ lb.; cinnamon, 1 tablespoonful; eggs, 10; white wine, 1 gill. *French pancakes*.—Eggs, 10; sugar, 6 tablespoonfuls; flour, 6 tablespoonfuls; milk, $\frac{1}{2}$ pint; lemon, juice of 1, peel of $\frac{1}{2}$ of 1; orange-flower water, to flavour. *German pancakes*.—Eggs, 6 whites, 12 yolks; sugar, $\frac{1}{2}$ lb.; milk, 1 quart; butter, $\frac{1}{2}$ lb.; yeast, sufficient; brandy, 1 wineglassful. *Madras pancakes*.—Eggs, 6; rice, 6 tablespoonfuls; sugar, to sweeten; cinnamon, to flavour; orange-flower water, to flavour. *New England pancakes*.—Cream, 1 pint; flour, 5 tablespoonfuls; eggs, 7 yolks, 4 whites; salt, sufficient. *Polonaise pancakes*.—Eggs, 8; cream, $\frac{1}{2}$ pint; butter, 2oz.; nutmeg and lemon-peel, to flavour; sugar, to sweeten; salt, sufficient; flour, 10oz. *Apple pancakes*.—Flour, 2 tablespoonfuls; milk, 1 gill; eggs,

8; cinnamon and lemon-peel, to flavour; currants, 2oz.; apples, 6.

PANSY or **HEARTSEASE**.—There are at least a hundred cultivated varieties of this favourite flower. The prevailing colours are purple and violet, each with many shades. They are in flower from the beginning of June till July. The midsummer heat interrupts their blooming for some time; but after the middle of August they commence again, and continue with a regular succession of varied and beautiful flowers, till checked by winter frosts. The finest pansies should have large round petals; the flower forming nearly a circle, one inch and



a quarter in diameter. The colours should be brilliant, distinct, and permanent; the eye rather small, and not deeply pencilled, and the stigma filling the open part of it. The flower-stalk should be strong and erect. Few flowers require more careful culture than pansies. They succeed best in a moderately light rich soil; a large portion of cow-dung mixed with the upper nine inches of soil will, in general, suit them; but the dung must be well decomposed into mould; in the absence of this, dung from an old hotbed will answer. The situation of the plants should be one sheltered from cutting winds, as these are very destructive, often injuring, and even killing, the plants close to the soil, by twisting them about. The situation should be open to the free circulation of the air, and exposed to the morning sun, but protected from the full influence of the mid-day sun, which injures the colour of the blooms. The plants should be placed together in beds prepared for the purpose. The situation should be cool and moist, but thoroughly drained; for, although the pansy requires considerable moisture during the blooming season, and through the summer months, yet it is very impatient of superabundant moisture, and the plants will never prosper when the soil becomes in any degree sodden. The propagation of pansies is by cuttings or seed. The seeds may be sown early in spring, under hand-glasses, or in a common frame; and the plants may be first pricked out under glass, and afterwards transplanted into

beds in the open garden, or put into pots. The young side shoots are to be preferred for cuttings, as the old hollow stems seldom strike freely, and do not grow so strong for spring blooming. Take off a sufficient number of these side shoots in August, or in the beginning of September, and for autumn blooming in April or May; these insert either under hand-glasses, or in pots placed in a cool frame in some good light compost, mixed with a liberal quantity of silver sand, taking care to keep them moderately moist, and shading them from the hot sun. The cuttings should be continually taken off or struck, and all those which are not planted out in beds by August, or the first week in September, should be potted in sixty-sized pots and kept in frames through the winter. In those pots they will grow all the winter and blossom early, but they must not be permitted to feel the frosts, because, being in a growing state, they cannot resist it so well. Any cuttings will strike at almost any time, but the small side-shoots taken when an inch and a half long, will root very freely under a common hand-glass. When it is desired to produce single flowers of a large size, much may be done by thinning the buds before they open; first, however, securing a likely flower into which the strength of a shoot is to be directed. Although such attention is required to produce these in perfection, there is no difficulty when the plants have plenty of pure air. Seed should be saved from only the best and most perfect blooms on a plant, and the rest should be removed, to allow all the strength to be concentrated in the chosen pods. When they turn yellow, they should be gathered, and they may be sown at any time, if they are sown in pans and protected. The disease to which the pansy is most subject, is a withering away suddenly, as if struck by something at the root. This disease has neither an ascertained cause, nor a certain remedy. Old plants are much more subject to it than young ones, and it appears to be most prevalent during hot and dry seasons. When a plant is thus struck, which is indicated by a withering of the foliage, if it be a rare and choice kind, immediately take all the cuts you can obtain, and strike them, as almost invariably the old plants die. Strong stimulating manures appear to favour this disease, and, as a preventive, the soil should be kept frequently stirred.

PAPER.—This well-known substance is made of various qualities, according to the uses for which it is to be employed. For packing parcels, brown paper is the best, being able to withstand wet and rough usage better than others. For writing, the cream-laid paper is most suitable, having a smooth surface over which the pen glides with ease and freedom. Coarse brown paper, denominated ironmonger's paper, is not only useful for heavy packages, but equally so for keeping silks, satins, laees, &c., in, as it preserves their colours. Printed paper is not fit to wrap up parcels in, as it not only discolours the articles it encloses, but also soils the gloves and the hands; it

is also equally unfit for having food placed within it, as sandwiches frequently are, the food becoming impregnated with the materials of which the printing-ink is composed. Economy of paper is to be recommended, as it is always useful; and a very good plan is, whenever a parcel is secured, to smooth out and fold up the papers, and lay them by in some place, where they may be readily found when wanted.

PAPER, TO REMOVE STAINS AND SPOTS FROM.—The clear solution of chloride of lime, diluted with twice its bulk of water, will effectually and expeditiously remove stains from prints and printed paper. First, soak the paper in clear water till it lies smooth; then remove it into a dish, large enough to hold it flat, filled with the solution diluted as above; the stains will disappear in a few minutes; after that, again soak the paper in clear water, to free it from the chloride of lime, and then dry it between sheets of blotting-paper. *To take writing-ink out of paper,* apply to it a camel's hair brush dipped in solution of tin, two drachms; water four drachms. After the writing has disappeared, the paper should be passed through water, then dried. *To extract grease spots from paper.* Gently warm the greased or spotted part of the paper, and then press upon it pieces of blotting-paper, one after another, so as to absorb as much of the grease as possible. Have ready some fine clear essential oil of turpentine, heated almost to a boiling state, slightly warm the greased part of the paper with a soft clean brush, and wet both sides of the spot with the heated turpentine. By repeating this application, the grease will be extracted. Lastly, with another brush, dipped in rectified spirits of wine, go over the place, and the grease will entirely disappear, without the paper being discoloured.

PAPER-HANGING, PROCESS OF.—This is very easily performed, and when undertaken by one of the members of the establishment, saves a great deal of expense and annoyance. The wall should be first prepared by rubbing it all over with pumice-stone, until all traces of former colouring or paper have disappeared. Next, wash the wall with size, made of an ounce of glue to a gallon of water, and when this is dry, the wall will be ready for the paper. This must be cut into lengths according to the different parts of the room; one edge of the plain strip must be cut off close to the pattern, and the other left half an inch wide. In all cases, the paper should be pasted some ten minutes or so before it is hung, as in that period it has time to stretch as much as it will do; and if applied without this precaution, it is sure to appear blistered when dry; with crimson and other delicately coloured papers, a lining paper is first applied. Begin by placing the close cut edge of the paper at one side of the window, stick it securely to meet the ceiling, let it hang straight, then press it down lightly and regularly with a clean cloth. The close cut edge of the next length will cover the half inch left on the first one, and so make a neat form; in this manner the operation is to be performed all round the room, and

finished at the other side of the window. No wall should be papered when it is possible to avoid it, until it has been plastered more than a year.

PAPER-HANGINGS, CHOICE OF.—The aspect, size, and general appearance of an apartment, is materially influenced by the paper on its walls; and the choice may be judiciously regulated by the following general rules:—Avoid paper having a variety of colours, or a large showy figure, as no furniture can appear to advantage with such. Large figured paper diminishes the extent of a large room, and makes a small one appear smaller. Choose nothing that appears extravagant or unnatural. Have regard to the uses of an apartment; the drawing-room should be light and cheerful, the parlour warm and comfortable, without being gloomy or sombre; bed-rooms, cool and quiet with neat small patterns. It is also worth while to consider the decorations of the wall; gilt frames show best on a dark ground, and dark frames, such as oak or gutta-percha, on a light ground. As regards colour, pale tints will be generally found the best. Rooms hung with scarlet, are rich but dismal and oppressive, they require also to be illuminated more, and at an earlier hour in the evening than lighter colours.

PAPER-HANGINGS, TO CLEAN.—Cut into eight half-quarters, a quarter loaf, two days old; it must not be either newer or staler. Blow off all the dust from the paper by means of a pair of bellows; take one of the pieces of bread, commence at the top part of the room, and holding the crust of the bread in the hand, wipe lightly downward with the crumb, about half a yard at each stroke, till the upper portion of the paper is completely cleaned all round. Then go round again, with the like sweeping stroke downwards; always commence each successive course a little higher than the upper stroke had extended, till the lower part be finished. This operation, if carefully performed, will make every old paper look almost equal to new. Great caution must be used not to rub the paper hard, nor to attempt cleaning it the cross or horizontal way. The soiled part of the bread must be each time cut away, and the pieces removed as soon as it may become necessary.

PAPIER MACHE.—A substance made of cuttings of paper, boiled in water, and beaten in a mortar till the mass is reduced to a kind of paste; and then boiled with a solution of gum-arabic or of size, to give tenacity to the paste. When dry, it is covered with a mixture of size and lamp-black, and afterwards varnished. Several articles of domestic use are made of this material, as trays, &c., being thus sufficiently strong for the purpose for which they are employed, and considerably lighter than similar articles made of wood or metal. In cleaning *papier maché* articles, they should be washed with a sponge and cold water without soap, dredged with flour while damp, and polished with a flannel.

PARALYSIS, OR PALSY.—A loss of voluntary motion, with or without an accompanying loss of sensation, and is either general or partial; that is, affecting the entire system or confined to a part, and is either caused by compression on the brain or spinal marrow, impaired nervous energy, exposure to intense cold, violent exercise, strong mental emotion, the presence of tumours, pressing on the origin of the nerves, from rheumatism, and sometimes from poisons, both vegetable and mineral, though that from lead is by far the most frequent. Paralysis, though it often occurs from simple debility, in persons of advanced age, more generally follows an attack of partial or complete apoplexy, and very frequently is the result of accidents. The symptoms of paralysis, when it comes on without any assignable primary disease, are loss of motion, in one or several parts, preceded by coldness, a creeping, pricking sensation, followed by a numbness that ultimately terminates in total torpidity, and incapacity of motion; sometimes the sensation or feeling of the part is gradually and concurrently impaired, till all feeling is lost with the deprivation of motion; at other times there is no defect in the sentient power, or else the loss of sensation is slight. These symptoms are attended with a sensation of languor or weariness, depression of spirits, weight and pain in the head, disinclination to all exertion, loss of memory, torpidity, sleepiness, vertigo, and coma; while the pulse is slow and soft, or quick, small and feeble. The only disease palsy can be confounded with is apoplexy, and from this it is known by the absence of the stertorous breathing, and the loss of sensation and motion being permanent; while in apoplexy, they are only temporary. The prognosis is unfavourable, when the parts paralysed become emaciated, and are withered and dry; on the other hand, the prognosis is favourable, when warmth, or pain, or itching, or a sense of pricking returns to the part. Though any portion of the body may be affected, the disease is more fatal when it attacks the upper extremities than the lower, and still more so, when the left side is the seat of the disease than the right. General paralysis may come on suddenly or by degrees, when from the former, it is the result of accidents to the brain or spinal marrow, or effusion of blood, as in apoplexy; when the latter, it commences at the toes or fingers, and creeps gradually over the body, numbing the parts over which it travels. The first consideration in the treatment of paralysis is, to remove the causes that obviously induced the paralysis, and restore sensation and motion to the part or parts affected; that is, if the attack is sudden and attended with heat and a full pulse, and the patient is of a plethoric habit, bleeding from the jugular vein or arm, strong cathartic medicines, blisters, hot water to the feet, and cold applications to the head, constitute the system of depletion that may, as for apoplexy, be necessary to adopt. When, however, paralysis attacks persons advanced in

life, of a thin, spare, or debilitated constitution, the treatment must be directly the opposite of that course just referred to in cases of a plethoric habit and congestions. In the former case, counter-irritation by mustard plasters, rubefacients, and irritating embrocations must be used externally, while stimulants, permanent and diffusible, are to be given internally. Of these the most serviceable are ammonia, ether, camphor, and brandy. When the head is perfectly free from all chance of congestion, and the action of the heart is low and regular, strychnine may be employed as an external remedy, and with very great probability of success; but though medical men give it in gradually increasing doses, from the sixth of a grain upwards, as an internal remedy, in the form of pills, no non-professional person should so venture to employ it. About half a grain put on the centre of a blister, and applied near the source of the nerves most implicated; the use is both safe, and, as we have said, beneficial, for it produces heat, twitchings, spasmodic contractions of the limb, and a disease like the disease it is meant to cure, ending, after a subsidence of the symptoms, in a restoration of health to the part. The constitutional treatment consists, in the palsy or debility of age, in a steady course of wine and quinine, steel, and the occasional employment of ammonia, ether, and brandy, given in camphor water as a vehicle, and the judicious adoption of one or more of the following external therapeutic agents. Stimulating embrocations, such as hartshorn and oil, opodeldoc and hartshorn, camphorated oil with turpentine, or oil of amber, turpentine, and sweet oil. The flesh-brush, or friction with a towel, or flour and mustard blisters in the direction of the nerves. Urtication, or stinging the part with nettles. Warm and salt water baths, with friction in the water, shampooing, and the medicinal use of the mineral waters of Bath. Besides these remedies, there is one agent that was long regarded as a mere secondary adjunct; extensive practice, and the appliances of art to its use, have justly advanced to a foremost rank as a curative agent, in all cases of loss of nervous power, or preternatural nervous action. This remedial power is electricity or galvanism, an agent that the cumbrous nature of the necessary apparatus long rendered inoperative for general benefit; but by the admirable and beautifully constructed portable batteries, invented by Pulvermacher, one of the greatest desiderata of the profession has been achieved; and, by means of one of his hydro-electric chains, or small electro-galvanic batteries, any affection of the nervous system, whether local, as in tic-douloureux, or its worst general form of palsy, may be treated without trouble or inconvenience. Independent of these their negative advantages, these medicinal batteries possess the further and greater recommendation of being applied with facility and comfort, directly over or around the seat or the course of the nerve, in whatever part of the body the disease may be seated,

or the erratic nature of the pain extends. The powerful and specific influence of electricity on the nervous system has long been a familiar fact in medicine, but the great difficulty, and that which acted almost as a prohibition to its use, was the knowledge how to moderate the potency of so powerful an agent, and maintain its influence for a sufficient length of time in one direction—obstacles, now entirely overcome by this invention, which, according to the nature of the disease, and the strength of the current of electricity required, can be maintained of the same exact power for an indefinite time; the subtle stream passing in the same direction along the nerve, till the chain or battery is removed from the body. These little instruments can be worn on all parts of the body without observation. According as the paralysis is general or local, and whether it attacks the upper or lower extremities, the right or the left side of the body, the nerves of the face, or those of any other part or member, must depend the strength and size of the battery worn; or whether it is suspended down the back, and retained in contact with the spinal column, or lies longitudinally, spirally, or transversely, must depend upon the disease, its situation, and strength. But, in whichever way applied, it acts as a direct stimulant to the nervous centres in palsy, and as a sedative in acute neuralgia, by tranquillizing the undue action, and the excited extremity of the nerve, to a condition analogous to a state of health.

PARCELS, TO PACK.—There are few persons except shopmen and tradespeople who know how to pack a parcel neatly and securely, and yet the process is as simple as possible. Spread the sheet of paper flat upon the table, then place the articles upon it in the centre, commencing with some large article, and placing the smaller ones evenly upon it. When all are collected together, turn the side of the paper nearest you on the articles and lap over the side farthest from you, at the same time turning in the edge of this latter a quarter of an inch or so, to prevent it being cut by the string. Place some weight upon these, such as a book, then having tied a knot in the end of the string, take the end in the left hand and the other portion in the right, and draw it underneath the right hand side of the parcel; then make a slip knot and pull the string tightly until it properly secures the opening in the paper; let the knot be exactly in the centre of the parcel, then pass the string under the left hand side of the parcel, and secure it as before, then turn the ends of the parcel neatly in, pass the string underneath, and finally fasten it at the point where the parcel was begun.

PARCHMENT GLUE.—Boil a pound of parchment in six quarts of water till the quantity be reduced to one quart, then strain off the dregs and boil it again, until it attains the consistence of glue. This will be found an efficient substitute for the ordinary glue and paste.

PAREGORIC ELIXIR.—An agreeable and effectual remedy for coughs and colds. Take a drachm of purified opium, a drachm of flowers of benjamin, a drachm of oil of aniseed, and two scruples of camphor, steep these constituents in a pint of brandy or proof spirit, let it stand for ten days, occasionally shaking it, then strain. Take a teaspoonful in half a pint of white wine, whey, or gruel the last thing at night.

PARENTS AND CHILDREN.—There are several laws relating to the position which parents and children hold towards each other. A parent may exercise full control over his children, he may lawfully correct them in a reasonable manner until they arrive at the age of twenty-one, when his legal power over them ceases. It is also supposed that a parent can exercise no legitimate control over a married daughter, above sixteen years of age, but on this point the law is not sufficiently clear. A parent may compel any or one of his children to contribute towards his support, in the event of his being in need and they in a position to afford relief. And if the children refuse, proceedings may be instituted against them, upon the parent becoming chargeable to the parish. A father is liable for the debts incurred by his son until he becomes of age, so far as *necessaries* only are concerned. In the event of any dispute or separation occurring between the parents of a child, the father has a right to the custody of his child bowerer young, and to compel its delivery by writ of *habeas corpus*, but the Court of Chancery has the power to order the mother access to the child if within seven years of age, and for the delivery of it to her until that age, upon a proper case being shown for that purpose. A grandfather is compellable to contribute towards the maintenance of his grandchildren, whether the child's father be able to support him or not. A father is also compellable to contribute towards the support of his married daughter, even though her husband may be able to maintain her, provided it be shown either that the husband has deserted so as to make it impossible for her to obtain her maintenance from him, or that she has misconducted herself in such a manner as to relieve him from further liability to maintain her. On the other hand, a father is not legally liable for the support of his son's wife and children during any period that he (the son) is unable to contribute to their maintenance. Sons-in-law and daughters-in-law are not bound to support their mother-in-law. A step-father or step-mother is not bound to maintain step-children beyond the age of sixteen.

PARLOUR.—An apartment usually situated on the ground-floor, and set aside as the common room of the family. In it company may sit at all hours of the day, and every kind of repast be taken. Such an apartment should be fitted up and furnished more for comfort than appearance.

PARLOUR MAGIC.—Under this head are comprised a number of feats inlegerdmain, and several optical illusions, which, if performed with skill, are excellently well

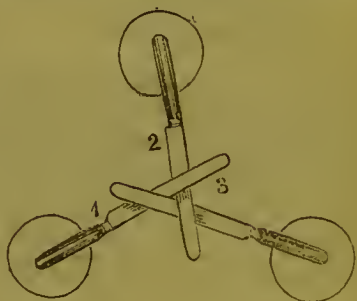
adapted for in-door amusements. The following will be found some of the most practicable and entertaining:—*The Flying Groat.* Anoint the nail of the middle finger with a little wax. Then place a fourpenny piece in the palm of the hand, and exhibit it to the company, saying that you have but to command it and the coin will vanish. Close your hand, pressing the wax on the fourpenny piece, then rapidly open it, and the piece will adhere to the wax, and be concealed behind the finger when the hand is held up with the palm toward the company. *To take feathers out of an empty handkerchief.* Borrow half a dozen ostrich feathers, and having taken off your coat dispose them smoothly along your arm, with the stems towards your hand. Put on your coat again. Borrow a handkerchief from one of the company, and display it to show that it is quite empty. Throw it over your left arm, and with your right hand draw out one of the feathers from beneath your coat-sleeve; at the same time, give it a flourish in the air, to remove any appearance of its having been in a cramped position. Put the feather into a vase or insert it into a hole in the table, and again throw the empty handkerchief over your arm and repeat the trick. When all the feathers are displayed they will make a great show, and appear much too bulky to have been concealed in your sleeve. *The Knotted Thread.* Have a piece of thread about eight or ten inches long, twisted about the top of one of the fingers of the left hand, and upon this finger place a thimble, the better to conceal the thread. One end of the thread should be available to make a knot on. Thread a needle with a similar piece. The thread in the needle must have one of its ends drawn up close, and this must be concealed between the forefinger and the thumb; the other end should lie down by the side of the thread which is fastened under the thimble. These two will then appear the two threads belonging to the needle. You now make, with great parade, a double or treble knot—of course this is in the false end—and then commence to sew; sew away rapidly, and the knotted thread will appear to have been passed every time through the piece of cloth or cambric operated on. *Magical amputation.* Have a knife with a gap in the middle of the blade. This gap must be carefully concealed from the company with the forefinger of the right hand. Then place the knife across your



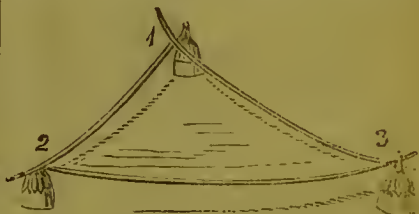
band or nose, and they will appear to be half cut off. *The knot dissolved.* Tie an ordi-

nary knot, single, not double, in a handkerchief, and give an end of it to one of the company to hold, telling him that he cannot pull the knot so tight but you will be able to dissolve it with a word. When he pulls, you utter a few mysterious words and slip the thumb of your left hand into the knot, as shown in the engraving. The handkerchief will then be pulled out straight, and the knot will disappear. *The wonderful filter.* Place before the company a vase full of ink. To assure the spectators that it really contains ink, dip a ladle into the vase and pour a portion of the ink upon a dish to be sent round for inspection. Then throw a handkerchief over the vase and instantly withdraw it, when the vase is found to contain pure water, in which a number of gold fish are swimming. The mystery is thus solved:—A lining of black silk is made to fit the interior of the vase with the greatest exactness. The water with which this is filled keeps the lining in its place. The ladle is made with a tubular handle, into which ink is poured. When dipped into the vase, the ink flows down the ladle into the bowl, and is poured out. In withdrawing the handkerchief the lining is also withdrawn, and all is complete. *The handcuffs unfastened.* Two persons tie their hands together with two pieces of string, as shown in the engraving, so that the strings cross. The problem is to free themselves without untying any of the knots. This will occasion a considerable deal of manœuvring, and it will be probably some time before the right

desire some person to remove one of the wafers from one side of the blade, turn the knife twice, and there will appear to be only two wafers on each side. Have another wafer removed from the same side, and again turn the knife twice, there will now appear only one wafer on each side. Remove a third wafer, turn the knife rapidly twice, and the wafers will seem to have all disappeared. The secret is in turning the knife between the finger and thumb so dexterously, that two circuits are made where only one is suspected, and the side upon which the wafers remain being consequently kept always out of sight. *The self-supporting bridge.* Set three glass tumblers, or cups, or gallipots upon a table in the form of a triangle, as illustrated in the accompanying



figure, and arrange them upon three knives. No. 1 thus rests upon No. 2, No. 2 upon No. 3, and No. 3 upon No. 1; and a bridge properly constructed will bear a considerable weight. *The tripod of pipes.* A similar trick to the preceding may be performed with three tobacco pipes. Procure three clean clay pipes, place the first of them bowl downwards, and let its stem be supported upon a second, placed similarly. The third



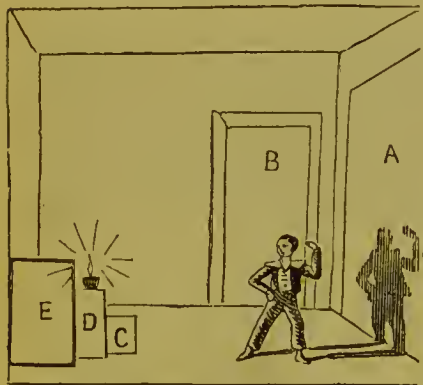
method is discovered. It is performed as follows:—A gathers up the middle part of the string that binds him, and slips it under the nose on B's wrist. Through this noose, if B's hand is put, the handcuffed parties will be free. *The surprising wafers.* This delusion depends entirely on the rapid manner in which the knife employed in the trick is turned in the hand. On each side of an ivory paper-knife place, or allow one of the company to do so, three wafers. These should be all of the same size and colour. Exhibit the knife freely, to show that there are really three wafers on each side. Then

pipe is placed so as to complete the triangle, its bowl supporting the stem of No. 2, and its stem resting upon No. 1. This little tripod, notwithstanding the brittle materials of its structure, will sustain a very heavy weight. *To lift a bottle with a straw.* Procure a thick strong straw about three times the length of the bottle with which you intend to operate, bend the thick end of it into a sharp angle, and put this bent end into the bottle. When the doubled part has reached below the neck, it will open and form a hook.

You have then only to raise the bottle by the other end. Care must be taken that the



straw selected is not bruised or bent otherwise than as it is intended to be, or it will fail in raising the bottle. *Jumping up to the ceiling.* There is no delusion more mystifying than this when properly managed. A sheet is stretched across the folding-doors separating two apartments. All the lights must be removed from the room in which the spectators are, and the arrangement in the room which forms the stage for the actors in the puzzle must be as shown in the diagram.



A represents the sheet fastened across between the apartments, B is a door by which the actors enter upon the scene, C is a stool placed in front of a second and higher one, D, upon which a powerful light is burning; behind D is E, a bench or table. The actor entering at B projects his shadow upon the sheet. At first, as he is close to the sheet the shadow will be only life-size, and it will depend upon the skill of the performer to make the shadow comical and diverting. But as he recedes from the sheet and approaches the light his shadow will increase in size, so that when close to the light it will assume gigantic proportions. The leap into the clouds is then easily effected. Stepping

upon the stool C the performer springs over the light on to E, and to the spectators in



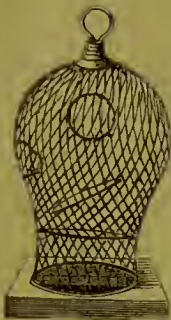
the darkened apartment he will appear to have jumped through the ceiling.

PARROT.—A very entertaining bird, which, if properly taught, will afford much amusement. Parrots thrive best when kept upon different kinds of grain, nuts, and seeds, varied with bread soaked in milk. Indian corn may be also occasionally substituted, being well boiled for three-quarters of an hour, when the water should be



drained off, and the corn given cold to the bird. Biscuit, and a small portion of loaf sugar, or thoroughly ripe fruit, may be added; but pastry and every kind of animal food must be scrupulously avoided. Clean gravel is always indispensable. The food is better if placed in glass or earthenware pans, which are more easily kept clean. Zinc boxes should never be used, as they are partially poisonous, and decidedly injurious; and tin boxes require much care to keep them thoroughly clean and dry. Parrots are peculiarly liable to inflammation, which sometimes arises from a sudden change in the weather, or from the bird having taken cold through being left uncovered during the night. When affected by it, the bird becomes dull and inactive, sleeping frequently in the morning, which is a certain indication of disease. The following will be found the most effectual remedy:—Mix a supply of whole grits well boiled with bread and milk, adding to this the

yolk of an egg boiled hard. About twice a week Indian corn may be substituted, and the juice of scalded rape-seed given for drink instead of water. Should this fail in effecting a cure, after a few days' trial, remove the food at night, placing in its stead a small quantity of magnesia dissolved in a tablespoonful of water. After the bird has partaken of this in the morning, it may be removed, and the above species of food continued as before. The parrot's cage should be commodious, strong, and comfortable. The perches should be thick in the middle, and conveniently placed for the bird to exercise without injuring himself. Beside the perches, there should be hung, quite clear of them, at the top of the cage, a ring or hook, freely moveable, upon which the bird can take exercise and roost at night. The cage shown in the engraving is one which will be found well adapted for this bird. It ought to be at least five feet in height, and three feet across the widest part.



PARSLEY AND BUTTER.—Wash some parsley very clean, and pick it carefully leaf by leaf; put a teaspoonful of salt into half a pint of boiling water, boil the parsley for about ten minutes, drain it in a sieve, mince it quite fine, and then bruise it to the pulp; put this into a sauce-boat, and mix with it, by degrees, about half a pint of good melted butter; this butter should be made without much flour, as the parsley will add to its thickness.

PARSLEY AND LIVER.—Wash the liver of a fowl or rabbit, and boil it for five minutes in five tablespoonfuls of water; chop it fine or pound it in a small quantity of the liquor it was boiled in, and rub it through a sieve; wash about one-third the bulk of parsley leaves, put them on to boil in a little boiling water, with a teaspoonful of salt in it; lay it on a hair sieve to drain, and mince it very fine, mix it with the liver, and put it into a quarter of a pint of melted butter, warm it up, but do not let it boil.

PARSLEY CRISPED.—Wash some sprigs of young parsley thoroughly, drain them from the water, and swing them in a clean cloth until they are quite dry; place them on a sheet of writing paper in a Dutch oven before a brisk fire, and keep them frequently turned until they are quite crisp; they will become so in from six to eight minutes. Parsley prepared in this manner forms a very delicate garnish for lamb chops, fish, &c.

PARSLEY, CULTURE OF.—There are several species of this plant in cultivation, but the preference is usually given to the sort called the curl-leaved. One sowing in spring will mostly furnish young leaves all the year; though, to answer a constant

demand, it will be as well to make successive sowings from February to May. Sow moderately thick in narrow drills, barely a quarter of an inch deep, twelve inches apart if in a bed by itself, or in a single one round the edge of a bed, the soil being raked level, and the stones immediately above the seed gathered off. The plants will come up in three or four weeks, and when two or three inches high may be gathered all the summer, winter, and following spring. In early June, when they make a show for seed, the stems should be cut down close to the bottom, and again in September, if they have acquired a straggling rank growth; this will cause them to shoot afresh, and acquire a strong growth before the arrival of severe weather. On the approach of frost, if protection is afforded to the plants by means of haulm or reed panels, so supported as not to touch them, they will be preserved in a much better state for use in winter and spring. But a still more effectual plan is to take up some of the strongest and best curled plants in September, and plant them in pots, two or three plants in each, using a rich soil. If these be placed in a pit or greenhouse, and abundance of liquid manure given, they will be very productive throughout the winter. To obtain seed, allow some of the plants to run up in June; they should not, however, stand nearer than eighteen inches to each other. The seed ripens early in autumn, and when perfectly dry, may be beaten out and stored.

PARSLEY FRIED.—When parsley has been prepared, as for crisping, and is quite dry, put it into a pan of hot lard or butter, and fry it quickly; have a slice ready to take it out the instant it is crisp, and drain it on a cloth spread upon a sieve reversed, and placed before the fire.

PARSLEY PIE.—Pick carefully a sufficient quantity of parsley from the thick stalks, scald it in boiling water and place it in a cullender to drain; cut a portion of breast of veal into small pieces, and having seasoned them with pepper and salt, place them in a pie-dish, in alternate layers of meat and the scalded parsley, putting in each layer a slice or two of pickled pork; when the dish is full, cover it with a suet crust, and bake it in a slow oven; when done, lift the crust carefully, and pour into the dish a large teacupful of cream, in which the yolk of an egg has been beaten up.

PARSLEY, TO PRESERVE.—To preserve parsley through the winter, gather it in May, June, or July, take the fresh-gathered sprigs, pick and wash them clean, and set them over the fire in a stewpan half full of water; sprinkle a little salt in it; boil and skim it clean, and then put in the parsley; let it boil for two or three minutes, then take it out and lay it on a sieve before the fire, so that it may dry as quickly as possible. Put it by in a tin box and keep it in a dry place; when it is required for use, lay it in a basin, and cover it with warm water for a few minutes previous to being used.

PARSLEY, USES AND PROPERTIES OF.

—In addition to parsley being used as a garnish and for sauces, it also serves as an excellent food for some animals. Rabbits are excessively fond of it, and it should always form a portion of the food given to these animals when kept in a state of confinement. This herb when used as a food for sheep imparts to their flesh a very agreeable flavour; it has also been found efficacious in curing the sheep-rot, and has been tried both in Hampshire and Berkshire with marked advantage. Another property in parsley is, that its leaves when chewed will take away offensive odours of the breath, such as when onions have been eaten, or spirits have been drunk.

PARSNIP.—Of this root there are many varieties, but one only is cultivated in England. The soil best suited for the parsnip is a rich, dry, sandy loam, and the deeper the better. Before sowing, the ground should be dug or trenched at least two spades deep, and the manure should be perfectly decomposed, or if recent, deposited at the bottom of the trench. The situation cannot be too open. Sow from the end of February to the beginning of April, but the earlier the better. Prepare beds not wider than five feet for the convenience of weeding, sow broadcast moderately thin, and rake the seed well into the ground; or sow in drills eighteen inches apart and half an inch deep. When the plants are from one inch to three inches high, in May or June, let them be thinned and cleared from weeds, either by hand or by small hoeing, thinning them from eight inches to twelve inches distance. Keep them afterwards clean from weeds till the leaves cover the ground, after which no further culture will be required. The roots will be pretty large by the end of September, and may be taken up as wanted, but they do not attain maturity till October, which is indicated by the decay of the leaves. The root will remain good for use till the April or May following. The quantity of seed required for a bed five feet by twenty feet, is half an ounce. The best seeds are to be procured from Guernsey or Jersey, where this root is grown to perfection. *To obtain seed*, some of the finest roots should be allowed to remain; or else, being taken up in February, planted in a situation open but sheltered from violent winds. If, of necessity, some of those are employed which have been preserved in sand, such should be selected as have not had their tops cut off very close. In dry weather, water plentifully twice a week. At the end of August the seed is usually ripe, the umbels may then be cut, and when thoroughly dried on cloths, the seed beaten out and stored. Seed should be never employed when more than a year old.

PARSNIP SOUP.—Take six or eight full-grown parsnips, scrape them clean and rasp them, add a few onions sliced, and if obtainable, a ripe tomato. While this is being done, the broth of any kind of fresh meat which has been got ready, should be

heated and seasoned with a little mace and salt; put the vegetables into two quarts of the skimmed broth, cover the stewpan close, and let the contents simmer by the side of the fire for two or three hours, by which time the vegetables will have become tender enough to be pulped through a hair sieve: after this is done, boil the soup till it is as smooth as a jelly, then serve.

PARSNIP WINE.—Take fifteen pounds of sliced parsnips, and boil them till quite soft in five gallons of water; drain the liquor thoroughly from them, run the pulp through a fine sieve, return the liquor into the boiler, and add three pounds of loaf sugar to every gallon; boil the whole for three-quarters of an hour; when tepid lay a toast covered with yeast in it, and cover it, keeping the cooler in a warm place; when it begins to ferment, put it into a cask, taking out the toast. It should not be racked till the autumn, nor bottled till six months afterwards.

PARSNIPS BOILED.—Scrape them and cut them in halves, and remove every speckle or blemish; put them into boiling water, and boil them from twenty minutes to an hour, according to their tenderness; they may be tried by thrusting a fork into them, and if that goes easily through, they are sufficiently done. As they require more or less time, according to their size, they should be matched as nearly as possible, so that all may be done at the same time. The water in which they are boiled should be well skimmed. Boiled parsnips are a favourite accompaniment to salt fish, and boiled pork and beef.

PARSNIPS, DIETETIC PROPERTIES OF.—The nutritious matter in parsnips is found by analysis to be ninety-nine parts in a thousand, of which nine parts are mneilage, and the remaining ninety are saccharine matter. It is a valuable culinary vegetable in soups and stews, and if well boiled is not difficult of digestion. As this vegetable has considerable heating properties, it should not be largely partaken of by persons of warm temperament.

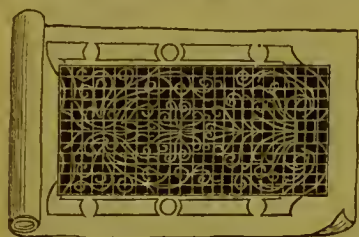
PARSNIPS FRICASSEED.—Scrape some parsnips and boil them in milk till they are soft; then cut them lengthwise into pieces two or three inches long; simmer them in a white sauce, made of six tablespoonfuls of broth, half a cupful of cream, a bit of butter, a little flour, mace, pepper, and salt.

PARSNIPS FRIED.—Boil the parsnips until they are half done, lift them out, and let them cool; slice them rather thickly, sprinkle them with salt and pepper, and fry them a pale brown in good butter. Serve them with roast meat, and dish them under it.

PARSNIPS MASHED.—Boil parsnips till tender, pare, and then mash them, and warm them in a stewpan with a little cream, a piece of butter, and a seasoning of pepper and salt. They may be thus prepared, either alone, or mixed with carrots, turnips, or potatoes; in any guise forming an agreeable and well-flavoured dish.

PARSNIPS, TO PRESERVE.—Dig up a portion of the roots in the beginning of November, when the leaves decay; cut the tops off close, and lay the roots in sand under cover, ready for use in hard frosty weather; the rest will keep good in the ground till they begin to shoot in the spring; then, in February or March, dig them up, cut the tops off, and thus preserved in sand, the roots will remain good till the end of April.

PARTERRE.—A portion of the garden set apart for the cultivation of flowers in picturesque forms and fanciful figures. The designs for these are most correctly transferred to ground as they are copied on paper, by covering the figure to be copied with squares formed by temporary lines intersecting each other at equal distances and at right angles, and by tracing on the ground similar squares, but much larger, according to a certain scale. Sometimes the figure is



drawn on paper in black, and the squares in red, while the squares on the ground are formed by stretching cords rubbed with chalk, which, by being struck on the ground (previously made perfectly smooth), leave white lines.

PARTIES, HINTS ON GIVING.—Parties are frequently given without any definite occasion, and with no set kind of entertainment: the *réunions* termed evening parties are of this nature. The refreshments furnished may consist of tea, coffee, lemonade and other effervescing beverages, fruit, cake, sandwiches, &c. There is no occasion for a sit-down meal, the refreshments being handed round by the servants, or by the male guests. The amusements may comprise singing, dancing, card-playing, acting charades, forfeits, and any other pastime which the ingenuity of the host and hostess can invent. The principle is, that the assembled guests are met together for the purpose of enjoying themselves, and administering to the enjoyment of others in any rational manner. At such times, therefore, as the mirth begins to flag, and conversation ceases, it is not out of place for any one to take the initiative in any pastime that is calculated to be generally acceptable. At the same time, the person giving the party should take care that the materials for amusement are ready at hand; and should, indeed, have mentally planned a programme of the evening's amusements, in order to prevent anything like dulness or inanity taking possession of the guests.

Thus the givers of the entertainment will not fail to invite persons who can play and sing, and especially secure the services of one of those persons who by his accomplishments and sociable disposition is able to take the lead in every kind of pastime, and to come to the rescue whenever an awkward pause occurs. It is considered etiquette to appear at an evening party in full dress, unless under special circumstances, when a person must be guided by his taste and discernment. The cost attending giving an evening party is much less, and the pleasure far greater, than that incidental to any other entertainment. In England, miscellaneous evening parties do not often go off with spirit, partly on account of the eating and drinking being made subsidiary to other attractions, and partly on account of the shyness and absence of vivacity characterizing English people generally. It would be possible, however, for persons of congenial tastes and dispositions to form little coteries of their own, and project a series of evening parties, to be given first at the house of one and then of another. Nothing could be more delightful than such *réunions* as these, which would not only be productive of immediate enjoyment, but serve to bind still closer the ties of friendship and goodwill. They would also be of incalculable advantage to young persons of both sexes, not only in habituating them to the proper tone of society, but in affording them opportunities for forming friendships and matrimonial alliances.—See BALL ROOM, BREAKFASTS, DINNER, INVITATION, SUPPER, TEA, WEDDING CEREMONY, &c.

PARTNERSHIP.—A commercial relationship existing between two or more persons, for the conducting of certain transactions on principles of joint responsibility and mutual benefit. The terms upon which partnerships are entered upon are usually expressed in a deed drawn up for this purpose; and without such a deed, no person should associate himself permanently with another in the way of business. The terms upon which partnerships are established are necessarily varied, according to the nature and extent of the commercial transaction engaged in. One clause, however, is almost invariably inserted, and exercises a wholesome check for the benefit of all parties, namely, that neither of the parties shall on his individual responsibility engage in any speculations, accept bills, become surety, lend or borrow money, under certain penalties made and provided. Partnerships can be dissolved only by mutual consent, and must endure for the term agreed upon. One partner of the firm, therefore, cannot legally dismiss or get rid of another, unless assent be given. When partnerships are dissolved, a public notice is given in the *London Gazette*, the name of the retiring member or members of the firm being duly set forth. Without this notice, no dissolution of partnership is recognisable; and the person withdrawing himself in this informal manner still continues to be responsible as a member of the firm. As partnerships are very serious

and important engagements, no one should enter upon them without having duly weighed the matter himself, and having taken the advice of friends upon whom he can rely. The circumstances and position of the person he contemplates joining should be clearly inquired into, otherwise he may cement himself with a man who though ostensibly prosperous, is in reality in embarrassed circumstances. Nor is this all: integrity and moral principles should not be disregarded. And, lastly, compatibility of temper, congeniality of disposition, and coincidence of views, should be taken into account. From the neglect of this latter circumstance, many associations have been formed with the most melancholy results: continual disagreements leading to a systematic playing at cross purposes; and finally separating in disgust, with opportunities lost through variance, and a good business sacrificed to personal spleen.

PARTRIDGE.—Of this bird there are two kinds, the red and the gray, the latter being that which is common in the country; the plumage is of a brown and ash colour, elegantly mixed with black; the tail is short, and the figure more plump than symmetrical. Partridges pair about the third week in February; and sometimes



after being paired, if the weather be severe, they all gather together and form a covey, and are then said to pack. They begin to lay in six weeks after pairing. The female lays her eggs (from twelve to twenty) on the ground, scraping together a few bents and decayed leaves into any small hollow. The young birds begin to appear about the first ten days in June, and the earliest will take the wing towards the latter end of the month. In dry seasons they are most numerous. Corn-fields are the places which partridges most delight in, especially while the corn is growing, that being a safe retreat where they remain undisturbed. They frequent the same fields after the corn is cut down, and there feed on the dropped grains, finding a sufficient shelter under cover of the stubble. When the winter comes on, and the stubble-fields are either trodden down or ploughed up, they then retire to the upland meadows, where they lodge in

high grass: they also sometimes resort to the low coppice woods, especially if they are contiguous to corn-fields. Partridge shooting commences by law on the 1st of September, when the birds are strong, and terminates on the 1st of February. In the course of September, the short flights of the coveys, in tolerably well preserved grounds, afford abundance of sport. In more open districts of country, where there is a wider range, partridge shooting requires more skill, and the aid of a steady pointer or setter. In shooting at a covey of partridges, select a bird on the outside, and fire at it alone; it is held as being unsportsmanlike to let fly indiscriminately at the centre of a group of birds.

PARTRIDGE BOILED.—Strip off the feathers, clean, and wash the birds well, cut off the heads, truss the legs like those of a boiled fowl, and, when ready, drop them into a large pan of boiling water; throw a little salt on them, and in a quarter of an hour they will be done. Serve them with mushroom or celery sauce and gravy.

PARTRIDGE BROILED.—Divide a young and well-kept partridge, and wipe it with a soft clean cloth inside and out, but do not wash it; broil it delicately over a very clear fire, sprinkling it with a little salt and cayenne; rub a little fresh butter over it the moment it is taken from the fire, and send it quickly to table, with a sauce made of a good slice of butter browned with flour, a little water, cayenne, salt, and mushroom ketchup poured over it.

PARTRIDGE, DIETETIC PROPERTIES OF.—The flesh of this bird is nutritious and easily digestible, and is very suitable for invalids; but this only applies to it when young, as, when old, it becomes tough, hard of digestion, and of a disagreeable flavour. Partridges should be hung some days before they are cooked, as they then become tender and high-flavoured.

PARTRIDGE PIE.—Pick, singe, and clean four partridges, cut off the legs at the mid-joint, season with pepper, salt, thyme, chopped parsley, and two mushrooms, of moderate size, chopped fine. Put the partridges at the bottom of the dish, and lay over them some veal cutlet and ham, cut into pieces about two inches square; add half a pint of good veal broth, cover with a puff paste, brush over with egg, and bake for an hour.

PARTRIDGE POTTED.—Clean the partridges thoroughly, and season them with mace, allspice, white pepper, and salt. Rub every part of the bird well; then lay the breast downwards in a pan, and pack the birds as closely as possible; put a great deal of butter on them, then cover the pan with a coarse flour paste, with a paper over it; tie it down securely, and bake. When cold, put the birds into pots, and cover them with butter.

PARTRIDGE PUDDING.—Skin a brace of well-kept partridges, and cut them down into joints; line a deep basin with suet crust, lay in the birds, which should be

rather highly seasoned with white pepper and cayenne, and moderately with salt; pour in water for the gravy, close the pudding carefully, and boil it for three hours to three hours and a half. When mushrooms are plentiful, put a layer of buttons or small flaps, cleaved as for pickling, alternately with a layer of partridge, in filling the pudding: the crust may be left untouched, and merely emptied of its contents, where it is objected to, or its place may be supplied with a richer one made of butter.

PARTRIDGE ROAST.—Let the bird hang as long as it can be kept without being offensive; pick it carefully, draw, and singe it; wipe the inside thoroughly with a clean cloth; truss it with the head turned under the wing, and the legs drawn close together, not crossed. Flour them when first laid to the fire, and baste them plentifully with butter. Serve them with bread sauce and good brown gravy.

PARTRIDGE SALMI.—Half roast the partridges, cut them up neatly, take off the skin; put the trimmings into a stewpan with a bit of butter and a tablespoonful of flour; stir the whole over the fire, then add a glass of white wine, and a little gravy or stock, some shalots, chopped parsley, thyme, bay-leaf, pepper, and salt; let it boil fast for half an hour, strain, skim, add the juice of a lemon, and make the partridge hot in the sauce.

PARTRIDGE SOUP.—Take a knuckle of veal, a piece of lean ham, three good-sized carrots, three large onions, two blades of mace, some white peppercorns, and five quarts of water; make this into a good stock, then add four partridges, stew them till they are quite tender, take the best parts off, beat them fine, and rub them through a sieve with a little of the stock; stew the bones in the stock, strain, and add the whole to the pounded meat; when served, season, adding some good cream, a spoonful of sugar, and a glass or two of port wine.

PARTRIDGE STEWED.—Truss the partridges with the wings over the back and the legs drawn in; cut a piece of pork or bacon in long strips, and put them into a stewpan, with a piece of butter the size of a walnut. Fry the bacon brown, and when quite done, put in the partridges, and keep turning them until they are very brown, taking care that the bacon should be as much in the breast as possible; then add a teacupful of gravy, and some trimmings of meat and vegetables. Have ready a large cabbage boiled; when well drained, slice it with butter, pepper, and salt; put it while warm with the gravy to the partridges, and let them stew gently for an hour, turning the birds frequently. Serve up the birds with the bacon underneath and the cabbage round them, squeezed dry, and the sauce well skimmed.

PARTRIDGE, TO CARVE.—Cut off slices from the breast, and then divide the bird in two. The wing is the prime part, especially the tip; the other choice parts are the breast and merrythought.

PARTRIDGES, TO CHOOSE.—If young, the bill is of a dark colour, and the legs yellowish; if new, the vent will be firm; if they are old, the bill will be white, and the legs blue; if stale, the vent will appear greenish, and the skin will peel when touched by the hand.

PASSION.—Indulgence in passion is frequently productive of serious and even fatal consequences, the brain and the heart being affected in a greater or less degree, and sometimes affected beyond the reach of recovery. Persons of an irritable disposition are apt to work themselves into a passion on the most trivial provocation, and when the dangers attendant on this course of conduct are considered, the necessity for controlling passion is self-evident.

PASSION FLOWER.—A flower taking its name from a fanciful idea that the appendages of the flower represent the passion of Christ when crucified. They are all



climbing plants, partly herbaceous and partly shrubby. There are many species, some are odoriferous, and others bear fruits which are edible, though not of very rich flavours. The common passion flower is the tallest and most woody of this family, the stem attaining almost the thickness of a man's arm, and giving out shoots to the length of fifteen feet in one season. The leaves are palmate and five-lobed, with smooth edges. The flowers are blue outside, and purple and white within. They have a faint odour and are very evanescent, continuing but for a day. The fruit is egg-shaped, and encloses a sweetish, disagreeable pulp, in the centre of which are seeds of a black colour. All the species will fruit in large pots, in hot-houses in this country. The roots are planted in a compost of very old tan and rich manure, in which they strike freely. They require only a temperate heat of about seventy degrees. As they grow, the very strong shoots should be cut off, as these do not bear so well as those which are less vigorous.

PASSOVER CAKE.—Make a stiff paste with biscuit powder, milk, and water; add a small piece of butter, the yolk of an egg, and a little white sugar. Cut into pieces, mould with the hand, and bake in a brisk oven. To make it *without butter*, wurm a quarter of a pint of water, flavoured with a little salt; mix four eggs with half a pound of Hebrew or "matso" flour, and a dessert-spoonful of powdered loaf sugar; mix with a tea-cupful of milk, and bake in a tin.

PASSPORT.—A document which a person intending to travel in most European cities, is compelled to provide himself with, to enable him to pass from one place to another without being detained or suspected. Passports for the several kingdoms are issued by the consuls representing those kingdoms, in London and other large cities of Great Britain. The procuring a passport is frequently attended with much delay, a person having sometimes to call several times at the office, and wait two or three days before he can achieve his object; this preliminary, therefore, should not be driven off to the last moment by persons about to travel. It is important to know that no passport is required for Paris; a permit to embark, which may be obtained at the Permit Office, Boulogne, on the Quai des Paquebots, may be obtained without charge, and answers all the purposes of a passport, which is obtainable only with considerable inconvenience and expense.

PASTE, ADHESIVE.—This substance, which is so useful for many domestic purposes, may be made as follows: Stir two table-spoonfuls of flour into half a pint of cold water until all lumps are broken, then pour it into a pint of boiling water, stirring in the meantime; afterwards let it boil up once or twice and take it off. *Bookbinders' paste.*—Mix wheaten flour first in cold water, then boil it till it assumes a glutinous consistence; and mix a fourth, fifth, or sixth of the weight flour, of powdered alum, and if required stronger, a little pounded resin. *Superior paste.*—Mix flour and water, with a little brown sugar, and a very small quantity of corrosive sublimate in powder: boil it until sufficiently thick and smooth. The sugar will keep the paste flexible, and prevent it sealing off from smooth surfaces, and the corrosive sublimate will check its fermentation: a drop or two of oil of aniseed, lavender, or bergamot, will prevent the paste turning mouldy.

PASTE, FOR TARTS, PIES, &c.—Paste may be made of various qualities, according to the materials used and the contents of the dish. The following receipts will be found the best that can be followed in each instance:—*Plain paste for large pies, &c.*—Put a pound and a quarter of lard into a pint and a half of water or milk; set it over the fire, and when boiling, make it into a paste with seven pounds of flour; knead well with the hands, and when the paste is thoroughly worked together turn it to use. *Light paste.*—Mix with a pound of sifted flour six ounces of fresh, pure lard; make a smooth paste with cold water; press the buttermilk

from ten ounces of butter, and form it into a ball by twisting it in a clean cloth. Roll out the paste, put the ball of butter in the middle, close it like an apple-dumpling, and roll it very lightly until it is less than an inch thick; fold the ends into the middle, dust a little flour over the board and paste-roller, and roll the paste thin a second time, then set it aside for three or four minutes in a very cool place; give it two more turns after it has again been left for a few minutes, roll it out twice more, folding it each time in three: it will then be fit for use. The sooner this paste is sent to the oven after it is made, the lighter it will be; if allowed to remain long before it is baked, it will be tough and heavy. *Rich paste for tarts.*—To six ounces of powdered lump sugar, add by degrees, ten ounces of fresh butter beaten to a cream, and to these add five eggs beaten very light, a little grated lemon-peel and some nutmeg; make it into the consistence of paste with some well-dried flour. *Plain short paste.*—Put two ounces of butter into two spoonfuls of water, and melt it in a saucepan. Take half a pound of flour and heat it in the oven; when hot, mix it with two ounces of cold butter with a knife, then pour the melted butter into the middle and stir it all together; roll it out once, put it over the fruit and bake it immediately. *Rich short paste.*—To half a pound of flour put seven ounces of butter, two ounces of finely sifted sugar, and the yolk of an egg beaten up with a table-spoonful of water. The butter, sugar, and flour to be well mixed before the fire, and the egg and the water added afterwards. *Crisp paste.*—Rub half a pound of butter into a pound and a half of flour; add three table-spoonfuls of powdered loaf sugar and the yolks of four eggs well beaten; work the whole well together with a wooden spoon, and roll it out very thin; bake it in a quick oven. Before serving, dust it with finely powdered sugar. *Cream paste.*—Stir a little fine salt into a pound of very dry flour, and mix gradually with it, sufficient, very thick sweet cream to form a smooth paste; roll in four ounces of butter and give the paste a couple of turns. Handle it as lightly as possible in making it, and send it to the oven as soon as it is ready; it may be used for fruit tarts, puffs, and other varieties of small pastry. *Family paste.*—Take two-thirds of wheaten flour, one-third of the flour of boiled potatoes, and some butter or dripping; bring the whole to a proper consistence with warm water, and a small quantity of yeast added when lightness is desired. *Suet paste.*—Chop a pound of fresh beef suet very fine, having first cleared it well from the skin; add this to a pound and a half of flour and a tea-spoonful of salt; mix it well into a stiff paste, with cold water, beating it out with the rolling-pin three times. This paste answers well for any kind of boiled fruit pudding or meat pie, where it is to be eaten hot. *Paste for raised pies.*—Put two pounds and a half of flour on the paste-board; set over the fire in a saucepan three-quarters of a pint of water, and half a pound of good lard; when the water boils, make a hole in the middle of the flour, pour in the water

and lard by degrees, gently mixing the flour with it with a spoon, and when it is well mixed, knead it with the hands till it becomes stiff; dredge a little flour to prevent it sticking to the board; do not roll it with the rolling-pin, but with the hands, to about the thickness of a quart pot, cut it into six pieces, leaving a little for the covers; put one hand in the middle, and keep the other close on the outside till you have worked it either in an oval or a round shape, then use.

Fleed paste.—This takes its name from the inside fat of a pig, which, when fresh, makes much better paste than when subsequently converted into lard. Clear it quite free from skin, and slice it very thin into the flour, add sufficient salt to give flavour to the paste, and make the whole up smooth and firm with cold water; lay it on a clean dresser, and heat it forcibly with a rolling-pin, until the flead is blended perfectly with the flour. It may then be made into cakes or used for pies.

French paste.—Sift two pounds and a quarter of fine dry flour, and break it into a pound of butter, work them well together with the fingers until they resemble fine crumbs of bread; then add a small teaspoonful of salt, and make the whole into a firm paste with the yolks of four eggs well beaten, mixed with half a pint of cold water, and strained; or for a somewhat richer crust of the same kind, take two pounds of flour, a pound of butter, the yolks of four eggs, half an ounce of salt, and less than half a pint of water, and work the whole well until the paste is perfectly smooth.

Paste for stringing tarts.—Mix with the hands a quarter of a pound of flour, an ounce of fresh butter, and a little cold water; rub it well between the board and the hand till it begins to string; cut it into small pieces, roll it out, and draw it into fine strings, lay them across the tarts in any device fancied, and bake them immediately.

Croquant paste for covering preserves.—Dissolve a drachm of sugar into as much cold water as will make four ounces of flour into a paste; knead and heat it as smooth as possible. Roll it to the size of the croquant form, and about a quarter of an inch thick. Rub the form with beef-suet, and lay it on the paste, and press it so closely as to cut the pattern completely through. Then lay it on a tin to bake. With a bunch of white feathers, glaze over the paste with the white of egg beaten, and sift fine sugar on it. Bake it in a slow oven, and gently remove the paste from the tin while yet warm, and lay it over the fruit which it is to cover. The same cover will serve many times if kept in a dry place.

PASTILLE.—A preparation which when ignited produces fumes of sufficient pungency and odour to overcome any unpleasant smells that may exist. There are various modes of making pastilles. The following are approved recipes:—1. Take sixteen parts of powdered gum benzoin, four parts of balsam of tolu and powdered sandal-wood, forty-eight parts of linden charcoal, one part of tragacanth and true laudanum, two parts of powdered saltpetre and gum arabic, and twelve parts of cinnamon water; heat into the consistency of thick paste, make

into the shape of cones, and dry in the air.

2. Eight drachms of cascarilla bark, four drachms of gum benzoin, two drachms of yellow sanders, two drachms of storax, two drachms of olibanum, six ounces of charcoal, one drachm and a half of nitre; reduce the substances to powder, mix into paste with a sufficient quantity of mucilage of tragacanth, and make into proper form.

3. Twelve ounces each of gum benzoin, olibanum, and storax; nine ounces of saltpetre, four pounds of charcoal, one pound of powder of pale roses, one ounce of essence of roses; mix with two ounces of gum tragacanth dissolved in a quart of rose water.

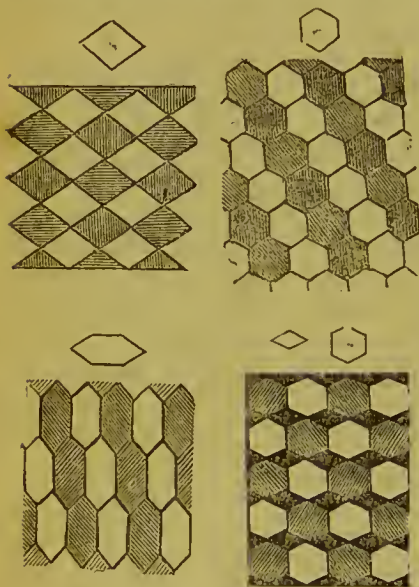
4. The same formula as the preceding may be varied by the substitution of pure orange-powder for the roses, and oil of neroli for the essence of roses. 5. By adding a few grains of camphor to the first recipe, a pastille suited to an invalid's chamber is prepared. If the scent of the above proves too powerful, increase the proportions of saltpetre and charcoal. Never use musk or civet in pastilles. These preparations should not be burned to excess, especially in the sick chamber, as they exhaust the pure air as well as correcting the impure, and besides, leave behind them a faint and suffocating smell long after their use is required.

PASTRY, DIETETIC PROPERTIES OF.—With most persons, and especially those who have weak digestion, pastry proves unwholesome; the richest kind of pastry is especially so, and lies in the stomach a heavy indigestible mass, for hours. The plainer kind of pastry is the least injurious, and even of this small quantities should be eaten. Invalids should scrupulously avoid pastry of any kind.

PASTRY, RULES FOR MAKING.—In making pastry, the greatest possible cleanliness should be observed. The slab, board, tins, moulds, cutters, &c., should be perfectly free from dust and dirt, and should only be used for the purposes for which they are intended. No part of the paste should be left adhering to the board or dish used in making. The best thing to make paste upon is a slab of marble or slate, which substances cause less waste, being cold and smooth. The coolest part of the house should be chosen for the operation; the hands should be previously washed in very hot water; and the less they come in contact with the paste, the better and lighter it will prove. The more expeditiously the fine kinds of paste are mixed and despatched to the oven, the better they will be. Also, much of their excellence depends upon the baking. They should have a sufficient degree of heat to raise them quickly, but not so fierce a one as to colour them too much before they are done, and still less to burn them. The oven door should remain closed after they are put in, and not removed until the paste is set. The butter should always be fresh and very good. Wash it in cold water before using it, and then make it up into hard lumps with the hands, squeezing the water well out. If the butter and the sugar are to be stirred together, always do

that before the eggs are beaten. For stirring them, nothing is so convenient as a round hard stick, about a foot and a half long, and somewhat flattened at one end. The eggs should not be beaten till all the other ingredients are ready, as they will fall very soon. If the whites and yolks are to be beaten separately, beat the whites first, as they will stand longer. Eggs should be beaten in a broad shallow pan, spreading wide at the top. Butter and sugar should be stirred in a deep pan with straight sides. Break every egg by itself in a saucer, before it is put into the pan, so that any bad ones may not be mixed with the others. Eggs are beaten most expeditiously with whisks. A small quantity of white of egg may be beaten with a knife, or a three-pronged fork. In mixing paste, the water should be added gradually, and the whole gently drawn together with the fingers, until sufficient has been added, when it should be lightly kneaded until it is as smooth as possible. When carelessly made, the surface is often left covered with small dry crumbs or lumps; or the water is poured in heedlessly in so large a proportion, that it becomes necessary to add more flour to render it workable in any way; and this ought to be particularly avoided when a certain weight of all the ingredients has been taken. The flour employed should be well dried in a plate in the oven, or before the fire.

PATCHWORK.—A kind of fancy needlework, which consists in forming variously coloured materials, as silk, satin, ribbon, &c., into any device fancied. The great re-



commendation of patchwork is, that instead of being a costly pursuit, it is, on the contrary, an economical one, as it admits of

odds and ends of various materials being turned to use, and formed into picturesque articles of domestic furniture, which would otherwise be thrown away and wasted. It affords also an elegant pastime, which may be at any moment abandoned or resumed, according to the humour of the fabricator. In making patchwork, the materials should be cut into sections, of the shape of circles, squares, diamonds, lozenges, or any form desired; and the form chosen must be maintained throughout, otherwise the uniformity of the work will be destroyed. This will be more clearly understood by the aid of the accompanying engravings: in each figure the sectional piece being shown above, and the manner in which it is worked out being demonstrated beneath. The articles essential next to the chief material, are some stiff paper, old envelopes, backs of letters, brown paper, &c., to form the shapes; lastly, the design—shapes cut on tin—and the designs themselves. The materials should be arranged into shades and qualities. After having been cut to the required sizes, and the irregularities of the edges removed, they are ready for use. The pattern should be placed before the person, and the shades being selected, the several pieces arranged so as to form the design, and the edges then neatly sewed together; after which they must be either pressed or ironed, the papers removed, and the lining proceeded with. When silks and velvets are employed, it improves the effect to combine the two, taking the silk for the lighter and the velvet for the darker shades; or to have the silk for the lighter shades, and two velvets for the others, shaded to pattern. A very pretty effect is produced by combining holland and calico, silk and satin, silk or satin and velvet, and rough cloth and fine cloth. The various articles which may be manufactured are, quilts, in coloured and white calico; antimacassars in silks; ottomans, in silks and velvets, silks and cloth; table covers, in silks and cloth; cushions for chairs or couches, in silks; and mats, rugs, and carpets, in cloth.

PATENT.—A privilege for a limited term to enjoy the commercial profits of any useful invention. The law relating to patents is somewhat complicated and intricate, and the proceedings in connection with them tedious and harassing. It is always better to place the matter in the hands of a patent agent, who, on the payment of certain fees, will relieve the principal of all further trouble, and protect his interests. A patent usually secures to the inventor the privilege of being the only fabricator of his invention, and solely enjoying the profit of the same for a period of seven years, after which term the privilege is withdrawn, and any person may manufacture the hitherto patented article. This law acts as a protection to the patentee, and should any person infringe it, an injunction may be obtained in Chancery, by which the person breaking the law is interdicted from making or selling any more imitations of the protected article, and is further mulcted in a penalty as a compensation for the supposed loss sustained by the patentee.





RECORD OF TREATMENT, EXTRACTION, REPAIR, etc.

Pressmark:

Binding Ref No: 3378

Microfilm No:

Date

NOV 98

Particulars

Chemical Treatment

Fumigation

Deacidification

Renaissance Liquid

Lamination

Solvents

Leather Treatment

Adhesives

Remarks

